

pointing out any mistake that he may have perceived. Then other scholars in the division, and after them the whole class, may make criticisms on the rendering, and finally the teacher supplies any point that has been omitted. While this is going on, the others correct the mistakes in their own exercises. The adversary, however, should not do so, but should keep his own unaltered that he may submit it to the criticism of his companions. As soon as the first sentence has been properly corrected, the next is taken, and so on until the exercise is finished. Then the adversary should read out his in the same way, while the original challenger takes care that he really reads his original translation and does not insert the corrections that have been made. The individual words and phrases are then criticised as before.

After this, a second pair of adversaries is chosen, and the same procedure is repeated for as long as the time permits.

26. In this connection the leaders have two duties to perform. Before the corrections begin they should see that all the scholars have their exercises ready, and while it is going on they should take care that each of them corrects his exercise when it contains the mistake that is under consideration.

27. The result of this will be

- (i.) That the work of the teacher will be lightened.
- (ii.) That no scholar will be neglected.
- (iii.) That the scholars will attend better than formerly.
- (iv.) That what is said to one will be of equal advantage to all.

(v.) The differences in the mode of expression, that are certain to occur in so many different translations, will not only improve and strengthen the scholar's acquaintance with the subject-matter, but will also give him facility in using the language.

(vi.) Finally, as soon as the first, second, and third pair have finished, it will frequently happen that the others have few or no mistakes left to correct. When

this is the case, the remainder of the time may be devoted to the class in general, that those who are still uncertain about a passage may bring forward their difficulties, or those who think that their rendering is better than that which has been given may read it and receive criticism on it.

28. The method here suggested has been illustrated by an exercise in translation. Its application, however, is just as easy, if the exercise be one in style, rhetoric, logic, theology, or philosophy.

29. We have thus seen that one teacher can instruct a hundred scholars with as little labour as he would expend in teaching a few.

SECOND PROBLEM

How is it possible for all the scholars to be taught from the same books?

30. It is an undisputed fact that too many objects at once distract the attention. It will therefore be of immense advantage if the scholars be allowed to use no books but those that have been expressly composed for the class in which they are; and in this way it will always be possible to use with effect the order that was given to the worshippers in the temples of old, namely, "This shalt thou do." Since the less the eyes are distracted, the easier it is to concentrate the mind.

31. Secondly, if all the materials that are required for instruction, blackboards, inscriptions, first reading books, dictionaries, schematic diagrams of the arts, etc., be kept in constant readiness. For if (as is often the case) the teacher must prepare the exercise-books for the scholars, and write a model for them to copy, or if he have to dictate grammatical rules, the text of an author, or its translation, how much time is thereby lost! It is therefore necessary that sufficient quantities of all the books which are used in each class be kept in readiness, and that translations be supplied with those texts that are to be translated into the mother-tongue. In this way the time

that would otherwise have been employed in dictation, copying, and translating, can be used, and with far greater advantage, for explanation, repetition, and imitation.

32. There need be no fear that any concession is here being made to the teacher's idleness. For a preacher is considered to have done his duty if he read a text from the Bible, explain it, and point out its application, and it is a matter of indifference to his hearers whether he has himself translated the text from the original, or has used some standard translation ; and in the same way it makes no difference to the scholars whether the teacher has arranged his own materials or whether some one else has done so for him. The important thing is that everything necessary be ready to hand, and that, under the teacher's direction, it be properly employed. It is indeed much better that everything of this nature be prepared beforehand, since, on the one hand, it will be freer from errors, and, on the other, more time will be left for the actual process of instruction.

33. For every school, therefore, books of this kind should be written,—in accordance with the rules already laid down for the attainment of ease, thoroughness, and economy of time,—and should constitute a complete, thorough, and accurate epitome of all the subjects of instruction. In short, they should give a true representation of the entire universe, which can thus be impressed upon the minds of the scholars. They should also, and this is a most important point, be written simply and clearly, and should give the scholars sufficient assistance to enable them, if necessary, to pursue their studies without the help of a teacher.

34. With this end in view it is desirable that they be written in the form of a dialogue. In this way (1) it is possible to suit the subject-matter and its exposition to the minds of the young, that neither may appear to them to be too full of difficulties. Nothing is more suited to inspire confidence than dialogue-form, and by means of it the mind can be gradually led on to the desired goal. It

is in this form that playwrights have expressed their views on the deterioration of morals, and have thereby admonished the people; in this form Plato wrote all his philosophical, and St. Augustine all his theological works, and Cicero also has employed it largely, thus coming down to the level of his readers. (2) Conversational form excites and retains the attention, while the alternation between question and answer, the various forms of expression and the amusing remarks that may be introduced, and even the changes that may be rung upon the *dramatis personæ*, all tend, not merely to counteract any antipathy to the subject, but even to create a keen desire for further knowledge. (3) Instruction makes a far greater impression when given in this way. We remember an event better when we have seen it ourselves than when we have simply heard it narrated, and, in the same way, instruction that is given through the medium of a drama or of a dialogue stays in the heads of the scholars far better than if it be merely set forth by a teacher in the ordinary way, as may be proved by experience. (4) The greater part of our lives consists of friendly conversation, and it should therefore be easy to induce the young to acquire useful information, when they are at the same time learning to express themselves fluently and well. (5) Finally, dialogues of this kind act as a mild recreation, and may enliven the private gatherings of the students.

35. It is also desirable that the books used be of the same edition, so that they may be similar page for page and line for line. This is important both for the sake of reference and that the localisation of passages on certain pages may assist the memory.

36. It will also be of great use if an abstract of the contents of all the books used in the class be placed on the walls of the room. This should consist of the text, greatly abbreviated and condensed, or of illustrative pictures and reliefs, by means of which the senses, the memory, and the understanding may be daily exercised in conjunction. Not without purpose was it that, as the ancients

relate, the walls of the temple of Æsculapius were covered with the precepts of the art of medicine, written there by Hippocrates himself. This great theatre of the world, also, God has filled with pictures, statues, and living emblems of His wisdom, that He may instruct us by their means. (Of these pictorial aids we will say more when we treat of the individual classes.)

THIRD PROBLEM

How is it possible for all the scholars in a school to do the same thing at one time?

37. It is evident that it would be a useful arrangement if all the pupils in a class did the same lesson at one time, for in this way the teacher would have less trouble and the scholars greater advantage. It is only when the attention of all is fixed on the same object, and when each tries in turn to correct the other, that keen rivalry can arise. In every way the teacher must imitate a captain of recruits. This latter does not exercise each of his men separately, but leads out a whole company at once and shows them how to use their arms; and even if he explain anything to one man apart, the remainder have to go through the same exercise in order that their attention may be retained.

The teacher should proceed on precisely similar lines.

38. Before he can do this it is necessary

(i.) That the course of instruction commence at one definite time in each year, just as the influence of the sun on the vegetable world commences at one definite time, namely, in spring.

(ii.) That the subjects of instruction be so divided that each year, each month, each week, each day, and even each hour may have a definite task appointed for it, since, if this be done, everything that is proposed will be completed with ease. But of this we will say more in the proper place.

FOURTH PROBLEM

How is it possible to teach everything according to one and the same method?

39. That there is only one natural method for all the sciences, and only one for all the arts and languages, will be shown in chaps. xx., xxi., and xxii. Any deviations that may be necessary are not important enough to constitute a fresh class, and are due less to peculiarities in the subject-matter than to the teacher himself, who must be guided by the ability, or the reverse, of his pupils and by the progress that they make in the actual languages or arts that he is teaching. The universal adoption of the natural method, therefore, will be as great a boon to scholars as a plain and undeviating road is to travellers. It will be easier to point out special aberrations, if the universal principle be first laid down as indisputable.

FIFTH PROBLEM

How can many things be explained in a few words?

40. To fill the minds of scholars with a dreary waste of books and of words is lost labour. For it is certain that a crust of bread and a mouthful of wine are more nutritious than a paunchful of trifle and of ragout, and that it is better to have a few gold pieces in one's purse than a hundred-weight of lead. Rightly does Seneca say of instruction: "Its administration should resemble the sowing of seed, in which stress is laid, not on quantity, but on quality." The conclusion, therefore, that we reached in chap. v. holds good: In man, the microcosm, everything is contained potentially. Bring light and he will straightway see.

And indeed for men who are working in the dark the faintest glimmer of light is sufficient. It is therefore necessary to select or to write handbooks of the sciences and languages which are small in compass and practically

arranged—cover the whole subject and contain a great deal of matter in a short space (Ecclesiasticus xxxii. 8)—that is to say, which place before the scholar the whole of the subject-matter by means of a small number of rules and definitions expressed in the simplest and clearest language, and sufficient in themselves to lead to more profound study.

SIXTH PROBLEM

How is it possible to do two or three things by a single operation?

41. The example of nature shows that several things can be done at one time and by means of the same operation. It is an undoubted fact that a tree grows above the ground and beneath it at the same time, and that its wood, its bark, its leaves, and its fruit, all develope simultaneously. The same observation applies to animals, whose limbs all develope and grow stronger at the same time. Further, each limb performs several operations. The feet, for instance, not only support a man but also move him forwards and backwards in various ways. The mouth is not only the entrance to the body, but also serves as a masticator and as a trumpet that sounds whenever called upon to do so. With a single inspiration the lungs cool the heart, purify the brain, and assist in voice-production.

42. We find the same thing in the arts: (1) In the sun-dial, the single shadow cast by the gnomon points out the hour of the day, the sign of the zodiac in which the sun is moving, the length of the day and of the night, the day of the month, and several other things. (2) One pole serves to direct, to turn, and to hold back a carriage. (3) A good orator or writer instructs, excites, and pleases at the same time, even though his subject may make it difficult to combine these three elements.

43. The instruction of the young should be similarly organised, so that every activity may produce several

results. It may be laid down as a general rule that each subject should be taught in combination with those which are correlative to it; that is to say, words should be studied in combination with the things to which they refer; while reading and writing, exercises in style and in logical thought, teaching and learning, amusement and serious study, should be continually joined together.

44. Words, therefore, should always be taught and learned in combination with things, just as wine is bought and sold together with the cask that contains it, a dagger with its sheath, a tree with its bark, and fruit with its skin. For what are words but the husks and coverings of things? Therefore, when instruction is given in any language, even in the mother-tongue itself, the words must be explained by reference to the objects that they denote; and contrariwise, the scholars must be taught to express in language whatever they see, hear, handle, or taste, so that their command of language, as it progresses, may ever run parallel to the growth of the understanding.

The rule shall therefore run as follows:

The scholar should be trained to express everything that he sees in words, and should be taught the meaning of all the words that he uses. No one should be allowed to talk about anything that he does not understand, or to understand anything without at the same time being able to express his knowledge in words. For he who cannot express the thoughts of his mind resembles a statue, and he who chatters, without understanding what he says, resembles a parrot.

But we wish to train up *men*, and to do so as quickly as possible, and this end can only be attained when instruction in language goes hand in hand with instruction in facts.

45. From this it follows that we ought to exclude from our schools all books that merely teach words and do not at the same time lead to a knowledge of useful objects. We must bestow our labour on that which is of real importance, and, therefore (as Seneca says in his 9th

Letter), must devote ourselves to the improvement of our understanding rather than to the enlargement of our vocabulary. Any reading that is necessary can be got through quickly out of school-hours without tedious explanations or attempts at imitation; since the time thus spent could be better employed in the study of nature.

46. Exercises in reading and writing should always be combined. Even when scholars are learning their alphabet, they should be made to master the letters by writing them; since it is impossible to find a more agreeable method or one that will give them a greater incentive to work. For, since all children have a natural desire to draw, this exercise will give them pleasure, and the imagination will be excited by the twofold action of the senses. Later on, when they can read with ease, they should be made to exercise their powers on subject-matter that would in any case have to be learned, that is to say, something calculated to give them practical information or to instil morality or piety. The same plan may be adopted when they learn to read Latin, Greek, or Hebrew. It will be of great advantage to read and copy the declensions and conjugations over and over again, until, by this means, reading, writing, the meaning of the words, and the formation of the case-endings, have been thoroughly learned. In this case we have a fourfold result from a single exercise. A system of concentration that is of such vital importance should be applied to all branches of study, in order that, as Seneca says, what is learned by reading may be given form by writing, or that, as St. Augustine says of himself, we may write while we make progress and make progress while we write.

47. As a rule, no care is shown in the choice of the subjects that are given as exercises in style, and there is no connection between the successive subjects. The result is that they are exercises in style and nothing else, and have very little influence on the reasoning powers; indeed it frequently happens that, after much time and study have been devoted to them, they prove absolutely

worthless and of no use for the business of life. Literary taste should therefore be taught by means of the subject-matter of the science or art on which the reasoning powers of the class are being exercised. The teacher should tell his pupils stories about the originators of the subject and the times in which they lived, or should give them exercises in imitation based on the subject-matter, so that, by a single effort, notions of style may be imbibed, the reasoning powers may be improved, and, since either the teacher or the pupils are continually talking, the faculty of speech also may be exercised.

48. Towards the end of the 18th chapter I have shown that it is possible for the scholars to give instruction in the subject that they have just learned, and, since this process not only makes them thorough but also enables them to make progress more rapidly, it should not be overlooked in this connection.

49. Finally, it will be of immense use, if the amusements that are provided to relax the strain on the minds of the scholars be of such a kind as to lay stress on the more serious side of life, in order that a definite impression may be made on them even in their hours of recreation. For instance, they may be given tools, and allowed to imitate the different handicrafts, by playing at farming, at politics, at being soldiers or architects, etc. In spring they may be taken into the garden or into the country, and may be taught the various species of plants, vying with one another to see who can recognise the greater number. In this way they will be introduced to the rudiments of medicine, and not only will it be evident which of them has a natural bent towards that science, but in many the inclination will be created. Further, in order to encourage them, the mock titles of doctor, licentiate, or student of medicine may be given to those who make the greatest progress. The same plan may be adopted in other kinds of recreation. In the game of war the scholars may become field-m Marshals, generals, captains, or standard-bearers. In that of politics they may be kings, ministers, chancellors, secretaries,

ambassadors, etc., and, on the same principle, consuls, senators, lawyers, or officials ; since such pleasantries often lead to serious things. Thus would be fulfilled Luther's wish that the studies of the young at school could be so organised that the scholars might take as much pleasure in them as in playing at ball all day, and thus for the first time would schools be a real prelude to practical life.

SEVENTH PROBLEM

How are the subjects of study to be progressively graded ?

50. How this can be done, we have seen in the 5th, 6th, 7th and 8th Principles of the 16th chapter, and in the 5th, 6th and 7th Principles of the 18th chapter. The important point is that suitable books should be written for the classical schools, and that these should embody hints to the teacher for their proper use, so that learning, morality, and piety may be led from one stage to another until they reach the highest.

EIGHTH PROBLEM

Of the removal and avoidance of obstructions.

51. Truly has it been said, that nothing is more useless than to learn and to know much, if such knowledge be of no avail for practical purposes ; and again, that not he who knows much is wise, but he who knows what is useful. The task of schools will therefore be rendered easier if the subjects taught be curtailed. This can be done if omission be made

- (i.) Of all unnecessary matter.
- (ii.) Of all unsuitable matter.
- (iii.) Of all minute detail.

52. Anything is unnecessary that is productive neither of piety nor of morality, and that is not essential for the cultivation of the mind. Such are the names of heathen deities, the myths connected with them, and the religious observances of the ancients, as well as the productions of

scurrilous and indecent poets and dramatists. It may occasionally be necessary for the individual to read these things in private, but in the schools, where the foundations of wisdom should be laid, nothing of the kind should be permitted. "What madness it is," says Seneca, "to learn so much trash, when time is so precious." Nothing, therefore, should be learned solely for its value at school, but for its use in life, that the information which a scholar has acquired may not vanish as soon as he leaves school.

53. Knowledge is unsuitable when it is uncongenial to the mind of this or that scholar. For there is as great a difference between the minds of men as exists between the various kinds of plants, of trees, or of animals; one must be treated in one way, and another in another, and the same method cannot be applied to all alike. It is true that there are men of great mental power who can compass every subject; but there are also many who find the greatest difficulty in mastering the rudiments of some things. Some display great ability for abstract science, but have as little aptitude for practical studies as an ass has for playing on the lyre. Others can learn everything but music, while others again are unable to master mathematics, poetry, or logic. What should be done in these cases? If we attempt to counteract a natural disinclination we are fighting against nature, and such effort is useless. For there will be either no result or one totally incommensurate with the energy expended. The teacher is the servant and not the lord of nature; his mission is to cultivate and not to transform, and therefore he should never attempt to force a scholar to study any subject if he see that it is uncongenial to his natural disposition; since it is more than probable that what is lacking in one direction will be compensated for in another. If one branch be cut off a tree, the others become stronger, because more vitality flows into them; and if none of the scholars be forced to study any subject against his will, we shall find no cases in which disgust is produced and the intelligence is blunted. Each one will develope in the direction

of his natural inclinations (in accordance with the Divine will), and will serve God and man in his station in life, whatever that may be.

54. In the same way, if all minute and technical details (such as the species of plants and of animals, the various callings of mechanics, the names of all their tools and so forth) had to be learned, this would be a most wearisome and confusing task. In school-work it is sufficient if the wide classes that exist in nature, with their most important and most essential divisions, be made thoroughly clear. More specialised knowledge can easily be acquired later, as the opportunity arises.

Those who wish to win a speedy victory over the enemy, do not waste time in storming unimportant places, but go straight to the head-quarters of the war; since it is certain that, if they can get the upper hand in a pitched battle, and capture the most important strongholds, all the others will surrender of their own accord. In the same way, if the principal points of any subject be mastered, the subsidiary details will be acquired with great ease. To this class of obstructions belong the voluminous dictionaries that contain every word in a language. For, since the greater number of them are never used, why should we force boys to learn them all, and thus overburden the memory?

We have now treated of the saving of time and effort in teaching and in learning.

CHAPTER XX

THE METHOD OF THE SCIENCES, SPECIFICALLY

1. WE must now collect together the scattered observations that we have made on the proper teaching of the sciences, of the arts, of morality, and of piety. By proper teaching I mean teaching that combines ease, thoroughness, and rapidity.

2. Science, or the knowledge of nature, consists of an internal perception, and needs the same accessories as the external perception of the eye, namely, an object to observe, and light by which to observe it. If these be given, perception will follow. The eye of the inner perception is the mind or the understanding, the object is all that lies within or without our apprehension, while the light is the necessary attention. But, as in the case of external perception a definite procedure is necessary in order to apprehend things as they are, so with internal perception a certain method is necessary if things are to be presented to the mind in such a way that it can grasp them and assimilate them with ease.

3. The youth who wishes to penetrate the mysteries of the sciences must carefully observe four rules :

- (i.) He must keep the eye of his mind pure.
- (ii.) He must see that the object be brought near to it.
- (iii.) He must pay attention.
- (iv.) He must proceed from one object to another in

accordance with a suitable method. For thus he will apprehend everything surely and easily.

4. Over the amount of ability that we possess we have no control, for God has portioned out this mirror of the understanding, this inner eye, according to His will. But it lies in our power to prevent it from growing dusty or dim. By dust, I mean the idle, useless, and empty occupations of the mind. For our mind is in constant activity, like a continually running mill-stone, and is supplied by its servants, the external senses, with material from every side. But unless the chief inspector, the reason, be continually on the watch, worthless material is supplied, such as chaff, straw, or sand, instead of corn or wheat. Thus it comes to pass that, as in the case of a mill, every corner is filled with dust. This inner mill, therefore, the mind (which is also a mirror) will be kept free from dust, if the young be kept away from worthless occupations and be skilfully trained to like worthy and useful things.

5. In order that the mirror may duly receive the images of the objects, it is necessary that these latter be solid and visible, and be also placed suitably before the eyes. Clouds and similar objects that possess little consistency make but a slight impression on a mirror, while objects that are not present make none at all. Those things, therefore, that are placed before the intelligence of the young, must be real things and not the shadows of things. I repeat, they must be *things*; and by the term I mean determinate, real, and useful things that can make an impression on the senses and on the imagination. But they can only make this impression when brought sufficiently near.

6. From this a golden rule for teachers may be derived. Everything should, as far as is possible, be placed before the senses. Everything visible should be brought before the organ of sight, everything audible before that of hearing. Odours should be placed before the sense of smell, and things that are tastable and tangible before the sense of taste and of touch respectively. If an object can make

an impression on several senses at once, it should be brought into contact with several, though with the limitations imposed in the seventh Principle of chap. viii.

7. For this there are three cogent reasons. Firstly, the commencement of knowledge must always come from the senses (for the understanding possesses nothing that it has not first derived from the senses). Surely, then, the beginning of wisdom should consist, not in the mere learning the names of things, but in the actual perception of the things themselves! It is when the thing has been grasped by the senses that language should fulfil its function of explaining it still further.

8. Secondly, the truth and certainty of science depend more on the witness of the senses than on anything else. For things impress themselves directly on the senses, but on the understanding only mediately and through the senses. This is evident from the fact that belief is at once accorded to knowledge derived from the senses, while an appeal is always made to them from *a priori* reasoning and from the testimony of others. We do not trust a conclusion derived from reasoning unless it can be verified by a display of examples (the trustworthiness of which depends on sensuous perception). No one could have such confidence in the testimony of another person as to disbelieve the experience of his own senses. Science, then, increases in certainty in proportion as it depends on sensuous perception. It follows, therefore, that if we wish to implant a true and certain knowledge of things in our pupils, we must take especial care that everything be learned by means of actual observation and sensuous perception.

9. Thirdly, since the senses are the most trusty servants of the memory, this method of sensuous perception, if universally applied, will lead to the permanent retention of knowledge that has once been acquired. For instance, if I have once tasted sugar, seen a camel, heard a nightingale sing, or been in Rome, and have on each occasion attentively impressed the fact on my memory, the incidents will

remain fresh and permanent. We find, accordingly, that children can easily learn Scriptural and secular stories from pictures. Indeed, he who has once seen a rhinoceros (even in a picture) or been present at a certain occurrence, can picture the animal to himself and retain the event in his memory with greater ease than if they had been described to him six hundred times. Hence the saying of Plautus: "An eye-witness is worth more than ten ear-witnesses." Horace also says: "What is entrusted to the fickle ears makes less impression on the mind than things which are actually presented to the eyes and which the spectator stores up for himself."

In the same manner, whoever has once seen a dissection of the human body will understand and remember the relative position of its parts with far greater certainty than if he had read the most exhaustive treatises on anatomy, but had never actually seen a dissection performed. Hence the saying, "Seeing is believing."

10. If the objects themselves cannot be procured, representations of them may be used. Copies or models may be constructed for teaching purposes, and the same principle may be adopted by botanists, geometricians, zoologists, and geographers, who should illustrate their descriptions by engravings of the objects described. The same thing should be done in books on physics and elsewhere. For example, the human body will be well explained by ocular demonstration if the following plan be adopted. A skeleton should be procured (either such an one as is usually kept in universities, or one made of wood), and on this framework should be placed the muscles, sinews, nerves, veins, arteries, as well as the intestines, the lungs, the heart, the diaphragm, and the liver. These should be made of leather and stuffed with wool, and should be of the right size and in the right place, while on each organ should be written its name and its function. If you take the student of medicine to this construction and explain each part to him separately, he will grasp all the details without any effort, and from that time forth will

understand the mechanism of his own body. For every branch of knowledge similar constructions (that is to say, images of things which cannot be procured in the original) should be made, and should be kept in the schools ready for use. It is true that expense and labour will be necessary to produce these models, but the result will amply reward the effort.

11. If any be uncertain if all things can be placed before the senses in this way, even things spiritual and things absent (things in heaven, or in hell, or beyond the sea), let him remember that all things have been harmoniously arranged by God in such a manner that the higher in the scale of existence can be represented by the lower, the absent by the present, and the invisible by the visible. This can be seen in the *Macromicrocosmus* of Robert Flutt,³⁰ in which the origin of the winds, of rain, and of thunder is described in such a way that the reader can visualise it. Nor is there any doubt that even greater concreteness and ease of demonstration than is here displayed might be attained. H

12. So much of the presentation of objects to the senses. We must now speak of the light, the absence of which renders the presentation of objects to the eyes useless. This light of the teaching art is attention, and by its means the learner can keep his mind from wandering and can take in everything that is put before him. It is impossible for any man to see an object in the dark, or if his eyes be closed, no matter how near to him it may be; and in the same way, if you talk to one who is not attending, or show him anything, you will make no impression on his senses. This we can observe in the case of those who, while lost in thought, do not notice what is going on before their eyes. He, therefore, who wishes to show anything to another at night must provide light, and must polish the object so that it shines; and in the same way a master, if he wish to illumine with knowledge a pupil shrouded in the darkness of ignorance, must first excite his attention, that he may drink in information with a greedy mind.

How this can be done we have shown in the 17th chapter, and in the first Principle of the 19th chapter.

13. So much of the light. We will now speak of the mode in which objects must be presented to the senses, if the impression is to be distinct. This can be readily understood if we consider the processes of actual vision. If the object is to be clearly seen it is necessary: (1) that it be placed before the eyes; (2) not far off, but at a reasonable distance; (3) not on one side, but straight before the eyes; (4) and so that the front of the object be not turned away from, but directed towards, the observer; (5) that the eyes first take in the object as a whole; (6) and then proceed to distinguish the parts; (7) inspecting these in order from the beginning to the end; (8) that attention be paid to each and every part; (9) until they are all grasped by means of their essential attributes. If these requisites be properly observed, vision takes place successfully; but if one be neglected its success is only partial.

14. For instance, if any one wish to read a letter that has been sent him by a friend, it is necessary: (1) that it be presented to the eyes (for if it be not seen, how can it be read?); (2) that it be placed at a suitable distance from the eyes (for if it be too far off, the words cannot be distinguished); (3) that it be directly in front of the eyes (for if it be on one side, it will be confusedly seen); (4) that it be turned the right way up (for if a letter or a book be presented to the eyes upside down or on its side, it cannot be read); (5) the general characteristics of the letter, such as the address, the writer, and the date must be seen first (for unless these facts be known, the particular items of the letter cannot be properly understood); (6) then the remainder of the letter must be read, that nothing be omitted (otherwise the contents will not all be known, and perhaps the most important point will be missed); (7) it must be read in the right order (if one sentence be read here and another there, the sense will be confused); (8) each sentence must be mastered before the next is com-

menced (for if the whole be read hurriedly, some useful point may easily escape the mind); (9) finally, when the whole has been carefully perused, the reader may proceed to distinguish between those points that are necessary and those that are superfluous.

15. These points should be observed by those who teach the sciences, and may be expressed in nine very useful precepts.

(i.) Whatever is to be known must be taught.

Unless that which is to be known be placed before a pupil, how is he to acquire a knowledge of it? Therefore let those who teach beware of concealing anything from their pupils, whether of intent, as do the envious and dishonest, or through carelessness, as is the case with those who perform their duties in a perfunctory manner. The two things necessary are honesty and hard work.

16. (ii.) Whatever is taught should be taught as being of practical application in every-day life and of some definite use.

That is to say, the pupil should understand that what he learns is not taken out of some Utopia or borrowed from Platonic Ideas, but is one of the facts which surround us, and that a fitting acquaintance with it will be of great service in life. In this way his energy and his accuracy will be increased.

17. (iii.) Whatever is taught should be taught straightforwardly, and not in a complicated manner.

This means that we must look straight at objects and not squint, for in that case the eyes do not see that at which they look, but rather distort and confuse it. Objects should be placed before the eyes of the student in their true character, and not shrouded in words, metaphors, or hyperboles. These devices have their use if the object be to exaggerate or to detract from, to praise or to blame what is already known. But when knowledge is being acquired they should be avoided and the facts should be set forth plainly.

18. (iv.) Whatever is taught must be taught with reference

to its true nature and its origin ; that is to say, through its causes.

This method of cognition is the best if the true nature of a fact is to be learned. For if its true nature be not made evident, this is not cognition but error. The true nature of a fact lies in the process that brought it into being. If it appear to contain elements not accounted for by that process, it is evident that there is some misapprehension. Now everything is brought into existence by its causes. Therefore to explain the causes of anything is equivalent to making a true exposition of that thing's nature, in accordance with the principles: "Knowledge consists in having a firm grip of causes," and "Causes are the guides of the understanding." Objects can thus be best, easiest, and most certainly cognised through a knowledge of the processes that produced them. If a man wish to read a letter he holds it as it was written, since it is a difficult thing to read a document that is inverted, or on its side, and in the same way, if a fact be explained by means of the process that gave it birth, it will be easily and surely understood. If, however, the teacher reverse the order of nature, he is certain to confuse the student. Therefore, the method employed in teaching should be based on the method of nature. That which precedes should be taken first, and that which follows last. ;

19. (v.) If anything is to be learned, its general principles must first be explained. Its details may then be considered, and not till then.

The reasons for this have been given in chap. xvi. Principle 6. We give a general notion of an object when we explain it by means of its essential nature and its accidental qualities. The essential nature is unfolded by the questions *what? of what kind? and why?* Under the question *what?* are included the name, the genus, the function, and the end. Under the question *of what kind?* comes the form of the object, or the mode in which it is fitted to its end. Under the question *why?* the efficient or causal force by which an object is made suitable to its

end. For example, did I wish to give a student a general notion of a man, I should say: Man is (1) the chief creation of God, and destined for dominion over other creatures; (2) endowed with freedom of choice and action; (3) and on that account provided with the light of reason, that he may direct his choice and his actions with wisdom. This is but a general notion of man, but it goes to the root of the matter and says everything about him that is essential. To these you may, if you like, add some of his accidental qualities, still keeping to generalities, and this must be done by asking the questions: *from what origin? whence? when?* You may then proceed to his parts, the body and the soul. The nature of the body can be demonstrated through the anatomy of its organs; that of the soul by examining the faculties of which it consists. All these points must be taken in their proper order.

20. (vi.) All the parts of an object, even the smallest, and without a single exception, must be learned with reference to their order, their position, and their connection with one another.

Nothing exists in vain, and sometimes the strength of the larger parts depends on that of the smallest. Certain it is that in a clock, if one pin be broken or bent, or moved out of its place, the whole machine will stop. Similarly, in a living body, the loss of one organ may cause life to cease, and in a sentence it is often on the smallest words, such as prepositions and conjunctions, that the whole sense depends. Perfect knowledge of an object can therefore only be attained by acquiring a knowledge of the nature and function of each of its parts.

21. (vii.) All things must be taught in due succession, and not more than one thing should be taught at one time.

The organ of vision is unable to take in two or three objects at one time (certain it is that he who reads a book cannot look at two pages at once, nay, cannot even see two lines, though they lie quite close together, nor two words, nor two letters, otherwise than successively); and in the

same way the mind can only grasp one thing at a time. We should therefore make a distinct break in our progress from one thing to another, that we may not overburden the mind.

22. (viii.) We should not leave any subject until it is thoroughly understood.

Nothing can be done in a moment. For every process involves motion, and motion implies successive stages. The pupil should therefore not pass on from any point in a science until he has thoroughly mastered it and is conscious that he has done so. The methods to be employed are emphatic teaching, examination, and iteration, until the desired result is attained. This we have pointed out in chap. xviii. Principle 10.

23. (ix.) Stress should be laid on the differences which exist between things, in order that what knowledge of them is acquired may be clear and distinct.

Much meaning lies concealed in that celebrated saying: "He who distinguishes well is a good teacher." For too many facts overwhelm a student, and too great a variety confuses him. Remedies must therefore be applied: in the first case order, by means of which one thing may be taken after another; in the second, a careful consideration of the differences that exist in nature, that it may always be evident in what respects one thing differs from another. This is the only method that can give distinct, clear, and certain knowledge; since the variety and actuality of natural objects depend on their distinctive attributes, as we have hinted in chap. xviii. Principle 6.

24. Now it is impossible that all teachers, when they enter on their profession, should be possessed of the requisite skill, and it is therefore necessary that the sciences which are taught in schools be mapped out in accordance with the foregoing laws. If this be done it will be difficult for any teacher to miss his mark. For, if the laws be rigorously observed, it is beyond question that any man who is once admitted into the royal palace and is allotted a certain space of time can easily and without any trouble

master its whole contents, its pictures, statues, carpets, and other ornaments ; and just as easy will it be for a youth who is admitted to the theatre of this world to penetrate with his mental vision the secrets of nature, and from that time forward to move among the works of God and of man with his eyes opened.

CHAPTER XXI

THE METHOD OF THE ARTS

1. "THEORY," says Vives, "is easy and short, but has no result other than the gratification that it affords. Practice, on the other hand, is difficult and prolix, but is of immense utility." Since this is so, we should diligently seek out a method by which the young may be easily led to the practical application of natural forces, which is to be found in the arts.

2. Art primarily requires three things: (1) A model or a conception; that is to say, an external form which the artist may examine and then try to imitate. (2) The material on which the new form is to be impressed. (3) The instruments by the aid of which the work is accomplished.

3. But when the instruments, the materials, and the model have been provided, three more things are necessary before we can learn an art: (1) a proper use of the materials; (2) skilled guidance; (3) frequent practice. That is to say, the pupil should be taught when and how to use his materials; he should be given assistance when using them that he may not make mistakes, or that he may be corrected if he do; and he should not leave off making mistakes and being corrected until he can work correctly and quickly.

4. With respect to these points eleven canons must be observed: six on the use of materials; three on guidance; and two on practice.

5. (i.) What has to be done must be learned by practice.

Artisans do not detain their apprentices with theories, but set them to do practical work at an early stage ; thus they learn to forge by forging, to carve by carving, to paint by painting, and to dance by dancing. In schools, therefore, let the students learn to write by writing, to talk by talking, to sing by singing, and to reason by reasoning. In this way schools will become workshops humming with work, and students whose efforts prove successful will experience the truth of the proverb : "We give form to ourselves and to our materials at the same time."

6. (ii.) A definite model of that which has to be made must always be provided.

This the student should first examine, and then imitate, as though he were following in the footsteps of a guide. For he who neither knows what has to be done nor how to do it, is unable to produce anything of himself, but must have a model placed before him. Indeed it is sheer cruelty to force any one to do what you wish, while he is ignorant what your wishes are ; to demand, that is to say, that he form straight lines, right angles, or perfect circles, unless you first give him a ruler, a square, and a pair of compasses, and explain their use to him. Further, great care should be taken to provide in the school-room formulæ for or models of everything that has to be made, and these, whether drawings and diagrams, or rules and models, should be correct, definite, and simple ; easy both to understand and to imitate. There will then be no absurdity in demanding of a man that he see, when provided with a light ; that he walk, when he already stands on his feet ; or that he use the tools that are already in his hands.

7. (iii.) The use of instruments should be shown in practice and not by words ; that is to say, by example rather than by precept.

It is many years since Quintilian said : "Through precepts the way is long and difficult, while through examples it is short and practicable." But alas, how little heed the ordinary schools pay to this advice. The very

beginners in grammar are so overwhelmed by precepts, rules, exceptions to the rules, and exceptions to the exceptions, that for the most part they do not know what they are doing, and are quite stupefied before they begin to understand anything. Mechanics do not begin by drumming rules into their apprentices. They take them into the workshop and bid them look at the work that has been produced, and then, when they wish to imitate this (for man is an imitative animal), they place tools in their hands and show them how they should be held and used. Then, if they make mistakes, they give them advice and correct them, often more by example than by mere words, and, as the facts show, the novices easily succeed in their imitation. For there is great truth in that saying of the Germans, "A good leader finds a good follower." Very apposite, too, is the remark of Terence, "Do you go before ; I will follow." This is the way, namely, by imitating, and without any laborious rules, that children learn to walk, to run, to talk, and to play. Rules are like thorns to the understanding, and to grasp their meaning needs both attention and ability, while even the dullest students are aided by example. No one has ever mastered any language or art by precept alone ; while by practice this is possible, even without precept.

8. (iv.) Practice should commence with the rudiments and not with ambitious works.

A carpenter does not begin by teaching his apprentice to build turrets, but first shows him how to hold the axe, to cut down trees, to shape planks, to bore holes, and to fasten beams together. A painter does not make his pupil commence by painting portraits, but teaches him how to mix colours, to hold the brush, and to make lines ; then to attempt rough outlines, and so on. He who teaches a boy how to read explains to him, not the contents of the book, but the names and nature of the letters, and shows him how they can be joined together into syllables ; then he proceeds to words, and then to sentences. In the same way the beginner in grammar should learn, first how

to inflect single words, then how to join two together. Then he may advance to simple and compound sentences, and so on till he reach continuous prose. So too in dialectic. The student should first learn to distinguish things and the concepts of things by means of their genera and species; then to classify them afresh, with respect to some other common quality (for such links exist between all things); then to define and distribute them; then to estimate the value of the things and their concepts in combination, seeking out the what? the whence? and the why? and whether it be necessary or contingent. When he has had sufficient practice in this, he may proceed to ratiocination and seek how to draw conclusions from given premises, and finally he may essay discursive reasoning or the complete conduct of disputations. The same course may with advantage be followed in rhetoric. The student should first devote some time to the collection of synonyms, and may then learn to add epithets to nouns, verbs, and adverbs. He may then proceed to the use of antithesis, and later on to that of periphrasis. Then he may substitute figurative words for the originals, alter the order of the words for the sake of euphony, and adorn a simple sentence with all the figures of speech. Finally, when thoroughly versed in all these several points, and not sooner, he may proceed to the composition of a complete discourse. If any one advance step by step in any art, as here indicated, it is impossible that he should not make progress.

The basis of the foregoing was discussed in chap. xvii. Principle 4.

9. (v.) Beginners should at first practise on a material that is familiar to them.

This rule we obtain from the 9th Principle of the 17th chapter, and from the 6th Corollary of the 4th Principle. Its meaning is that students should not be overburdened with matters that are unsuitable to their age, comprehension, and present condition, since otherwise they will spend their time in wrestling with shadows. For example, when a Polish boy is learning to read or to write his letters

he should not be taught to do so from a book written in Latin, Greek, or Arabic, but from one written in his own language, that he may understand what he is doing. Again, if a boy is to understand the use of the rules of rhetoric, the examples on which he is made to practise them should not be taken from Virgil or from Cicero, or from theological, political, or medical writers, but should refer to the objects that surround him, to his books, to his clothes, to trees, houses, and schools. It will also be of use if the examples that are taken to illustrate the first rule be retained, although familiar, to illustrate the remainder. In dialectic, for example, a tree may be taken, and its genus, its species, its relations to other objects, its characteristic peculiarities and the logical definition and distribution of the term may be treated of. We may then proceed to the various ways in which a statement may be made about a tree. Finally, we may show how, by a perfect train of reasoning, and by taking the facts already ascertained as our starting-point, we may discover and demonstrate other properties of a tree. In this way, if, in each case, the use of the rules be illustrated by the same familiar example, the boy will easily master their application to all other subjects.

10. (vi.) At first the prescribed form should be imitated with exactness. Later on more freedom may be allowed.

A form will be expressed with more exactness in proportion as care is taken to make it resemble its original. Thus coins that are struck by one die are exactly like the die and one another. So also with books printed from metal type, and with casts made in wax, plaster, or metal. In all other artistic operations, therefore, as far as is possible, any imitation (at any rate the first) should be an exact copy of its original, until the hand, the mind, and the tongue gain more confidence, and can produce good imitations by working freely on their own lines. For instance, those who learn writing take a thin and transparent sheet of paper, place it over the copy that they wish to imitate, and thus can easily form the letters that show through. Or the characters may be printed very faintly on a white page, so

that the pupil may go over them with pen and ink, and in this way may easily acquire the habit of shaping them. The same thing holds good in style, if any construction or sentence extracted from a classic writer have to be imitated. If the original phrase be "Rich in possessions," the boy should be made to imitate it by saying, "Rich in coins," "Rich in moneys," "Rich in flocks," "Rich in vineyards." When Cicero says, "In the opinion of the most learned men, Eudemus easily holds the first place in astrology," this may be copied with very little alteration as "In the opinion of the greatest orators, Cicero easily holds the first place in eloquence," "In the opinion of the whole Church, St. Paul easily holds the first place in Apostleship." So too in logic, if the well-known dilemma be given: It is either day or night. But it is night; therefore it is not day; the boy may learn to imitate it by similarly opposing contradictory conceptions to one another. As, "He is either unlearned or learned. But he is unlearned; therefore he is not learned"; "Cain was either pious or impious, but he was not pious"; and so on.

11. (vii.) The models of the objects that have to be produced must be as perfect as is possible, so that if any one exercise himself sufficiently in imitating them it will be possible for him to become perfect in his art.

It is impossible to draw straight lines with a curved ruler, and in the same way a good copy cannot be made from a bad model. Great care should therefore be taken that models be prepared of everything that is to be done in school, or indeed in life, and that these be exact, simple, and easy to imitate. They may be either models, pictures and drawings, or precepts and rules; but all must be very short, very clear, self-evident, and absolutely correct.

12. (viii.) The first attempt at imitation should be as accurate as possible, that not the smallest deviation from the model be made.

That is to say, as far as is possible. For whatever comes first is, as it were, the foundation of that which follows. If the foundation be firm, a solid edifice can be constructed

upon it, but if it be weak this is impossible. According to the observations of physicians, the initial defects of digestion cannot be repaired later on, and similarly in any operation an error at the beginning vitiates all that follows. For this reason Timotheus the musician used to demand twice as large a fee from those pupils who had learned the rudiments of their art elsewhere, saying that his labour was twofold, as he had first to get them out of the bad habits that they had acquired, and then to teach them correctly. Those, therefore, who are learning any art should take care to make themselves masters of the rudiments by imitating their copies accurately. This difficulty once overcome, the rest follows of itself, just as a city lies at the mercy of foes when its gates are broken in. All haste should be avoided, lest we proceed to advanced work before the elementary stages have been mastered. He goes fast enough who never quits the road, and a delay which is caused by obtaining a thorough grip of first principles is really no delay, but an advance towards mastering what follows with ease, speed, and accuracy.

13. (ix.) Errors must be corrected by the master on the spot ; but precepts, that is to say the rules, and the exceptions to the rules, must be given at the same time.

Hitherto we have urged that the arts be taught rather by example than by precept : we now add that precepts and rules must be given as well, that they may guide the operations and prevent error. That is to say, the less obvious points of the model should be clearly explained, and it should be made evident how the operation should begin, what it should aim at, and how that aim can be realised. Reasons should also be given for each rule. In this way a thorough knowledge of the art, and confidence and exactness in imitating, will be attained.

But these rules should be as short and as simple as possible, since we do not want to grow gray while acquiring them. When once mastered they should be of perpetual use, even when laid aside, just as knee-bands are of use to a child who is learning to walk, and, though they

are afterwards discarded, the advantage derived from them remains.

14. (x.) The perfect teaching of art is based on synthesis and analysis.

We have already shown (chap. xviii. Principle 5) by examples taken from nature and the workshop that in this relation synthesis is more important. The following points in addition will show that synthetic exercises should generally come first : (1) We should always commence with what is easy, and our own efforts are easier to understand than those of other people. (2) Writers take pains to conceal the artifices by which their results are obtained, so that at first the student finds difficulty in understanding what he sees, or fails to do so altogether. This difficulty would be removed if he began by practising on his own attempts, which are void of artifice. (3) The chief thing aimed at should be given the chief place in practice, and our real aim is to accustom the student of art to produce original work, and not merely to copy what is placed before him (see chapter xviii. Principle 5).

15. For all this, the accurate analysis of the work of others must not be neglected. It is only by continually traversing it that we get to know a road, its by-paths, and its cross-roads. Besides, the variety that exists in nature is so great that it is impossible for rules to cover it or for one mind to master it. Many processes require many rules to express them, and these we can only learn if we analyse and study, and by imitation and emulation put ourselves in a position to produce similar results.

16. It is our wish then that in each art complete and exact models or examples of everything that can be produced in that art be supplied to the student. Precepts also and rules should be given him to help him to carry out the processes, to guide his efforts at imitation, to show him how to avoid making faults, and to correct them when made. Then other and different models should be given him, and these he should learn to classify and compare with the models that he has already used, and by copying

a model that is like one previously used to produce work that resembles the original. After this, the finished works of other artists (who must be well known) may be examined and analysed in accordance with the models and rules that are already familiar. In this way the student will learn to employ the rules with greater ease, and will acquire the art of concealing his art. Only after a course of exercises of this kind will he be in the position to criticise artistic productions, whether his own or those of others.

17. (xi.) These exercises must be continued until artistic production becomes second nature.

For it is practice, and nothing else, that produces an artist.

CHAPTER XXII

THE METHOD OF LANGUAGES

1. LANGUAGES are learned, not as forming in themselves a part of erudition or wisdom, but as being the means by which we may acquire knowledge and may impart it to others.

It follows, therefore, (1) that not all languages should be learned, for this would be impossible; nor many, for this would be useless and would waste time that might be devoted to the acquisition of practical information; but only those that are necessary. Now necessary languages are these: the vernacular, for use at home, and the languages of the adjoining countries, for the sake of holding intercourse with neighbours. Thus for the Poles, German would be necessary; for others, the Hungarian, Wallachian, or Turkish languages. For the reading of serious books Latin is also advisable, as it is the common language of the learned. For philosophers and physicians, Greek and Arabic; and for theologians, Greek and Hebrew.

2. Not all these languages should be learned thoroughly, but only so far as is necessary.

It is not necessary to speak Greek or Hebrew as fluently as the mother-tongue, since there are no people with whom we can converse in those languages. It suffices to learn them well enough to be able to read and understand books written in them.

3. The study of languages, especially in youth, should be joined to that of objects, that our acquaintance with

the objective world and with language, that is to say, our knowledge of facts and our power to express them, may progress side by side. For it is men that we are forming and not parrots, as has been said in chap. xix. Principle 6.

4. From this it follows, firstly, that words should not be learned apart from the objects to which they refer; since the objects do not exist separately and cannot be apprehended without words, but both exist and perform their functions together. It was this consideration that led me to publish the *Janua Linguarum*; in which words, arranged in sentences, explain the nature of objects, and, as it is said, with no small success.

5. Secondly, that the complete and detailed knowledge of a language, no matter which it be, is quite unnecessary, and that it is absurd and useless on the part of any one to try to attain it. Not even Cicero (who is considered the greatest master of the Latin language) was acquainted with all its details, since he confessed that he was ignorant of the words used by artisans; for he had never mixed with cobblers and labourers, so as to see their handiwork and hear the technical terms that they used. Indeed what object could he have had in learning such terms?

6. Those who have expanded my *Janua* have paid no attention to this, but have stuffed it with uncommon words and with matter quite unsuited to a boy's comprehension. A *Janua* should remain a *Janua*, and anything further should be reserved for a future time. This is especially the case with words which either never occur, or which, if met with, can easily be looked up in subsidiary books (such as vocabularies, lexicons, herbaries, etc.). It was for this reason that I discontinued my *Latinitatis Posticum* (into which I was introducing obsolete and unusual words).

7. In the third place it follows that the intelligence as well as the language of boys should preferably be exercised on matters which appeal to them, and that what appeals to adults should be left for a later stage. They waste their time who place before boys Cicero and other great writers.

For, if students do not understand the subject-matter, how can they master the various devices for expressing it forcibly? The time is more usefully spent on less ambitious efforts, so devised that the knowledge of the language and the general intelligence may advance together and step by step. Nature makes no leap, and neither does art, since it imitates nature. We must teach boys to walk before we give them lessons in dancing; to ride on a hobby-horse before we set them on a charger; to prattle before they speak, and to speak before they deliver orations. It was Cicero who said that he could teach no one to deliver orations who had not first learned how to talk.

8. As regards the plurality of tongues, our method, which we will reduce to eight rules, will render the acquisition of the various languages an easy matter.

9. (i.) Each language must be learned separately.

First of all the mother-tongue must be learned, and then the language that may have to be used in its place, I mean that of the neighbouring nation (for I am of opinion that modern languages should be commenced before the learned ones). Then Latin may be learned, and after Latin, Greek, Hebrew, etc.

One language should always be learned after, and not at the same time as, another; since otherwise both will be learned confusedly. It is only when they have been thoroughly acquired that it is of use to compare them by means of parallel grammars, dictionaries, etc.

10. (ii.) Each language must have a definite space of time allotted to it.

We should take care not to convert a subsidiary study into a chief one, or to waste on the acquisition of words the time in which we might gain a knowledge of things. The mother-tongue, since it is intimately connected with the gradual unfolding of the objective world to the senses, necessarily requires several years (I should say eight or ten, or the whole of childhood, with a part of boyhood). We may then proceed to the other modern languages, each of which can be sufficiently mastered in one year. Latin can

be learned in two years, Greek in one year, and Hebrew in six months.

11. (iii.) All languages are easier to learn by practice than from rules.

That is to say, by hearing, reading, re-reading, copying, imitating with hand and tongue, and doing all these as frequently as is possible. Cf. the preceding chapter, canons i. and xi.

12. (iv.) But rules assist and strengthen the knowledge derived from practice.

This we have treated of in the previous chapter, canon ii. We speak more especially of the learned languages which we are compelled to learn from books, though we do not exclude modern languages. For Italian, French, German, Bohemian, and Hungarian can be, and indeed have already been, reduced to rules.

13. (v.) The rules to which languages are reduced should be grammatical and not philosophic.

That is to say, they should not inquire into the causes and antecedents of words, phrases, and sentences, or seek to find out why this or that construction is necessary, but should simply state what is correct and how the constructions should be made. The subtler investigation into the causes and connecting links, the similarities and dissimilarities, the analogies and anomalies that exist in things and in words, is the business of the philosopher, and does but delay the philologist.

14. (vi.) In writing rules for the new language the one already known must be continually kept in mind, so that stress may be laid only on the points in which the languages differ.

To call attention to points that they possess in common is not merely useless, but actually harmful, since the mind is terrified by the semblance of greater prolixity and irregularity than really exist. For instance, in Greek grammar there is no need to repeat the definitions of nouns, verbs, cases, and tenses, or rules of syntax which convey nothing new, and which may be considered as

already familiar. Those only need be included in which the usage of Greek differs from that of Latin, which is already known. In this way Greek grammar may be reduced to a few pages, and will thus be both clearer and easier.

15. (vii.) The first exercises in a new language must deal with subject-matter that is already familiar.

Otherwise the mind will have to pay attention to words and to things at the same time, and will thus be distracted and weakened. Its efforts should therefore be confined to words, that it may master them easily and quickly. Such subject-matter might very well be the Catechism, or Biblical history, or in fact anything that is sufficiently familiar. (Being short, my *Vestibulum* and *Janua* might be used; though these are more suitable to commit to memory, while the subjects suggested above are fit for constant reading on account of the constant recurrence of the same words, which will thus grow familiar and impress themselves on the memory.)

16. (viii.) All languages, therefore, can be learned by the method.

That is to say, by practice, combined with rules of a very simple nature that only refer to points of difference with the language already known, and by exercises that refer to some familiar subject.

17. *Of the languages that should be learned carefully.*

As we said at the commencement of the chapter, all languages need not be learned with equal accuracy. The mother-tongue and Latin are the most worthy of attention, and we should all master them thoroughly. This course of language-study may be divided into four ages—

The first	} age is	{	babbling infancy ripening boyhood maturer youth vigorous manhood	}	in which we learn to speak	{	indistinctly
The second							correctly
The third							elegantly
The fourth							forcibly

18. Gradation of this kind is the only true principle.

On any other system everything falls into confusion and disorder, as we have most of us experienced. But through these four grades all who wish to learn languages may pass with ease if the proper materials for teaching languages have been provided; that is to say, suitable school-books for the pupils and hand-books to assist the teacher, both of which should be short and methodical.

19. The school-books, suited to the several ages, should be four in number—

(i.) The *Vestibulum*.

(ii.) The *Janua*.

(iii.) The *Palatium*.

(iv.) The *Thesaurus*.

20. The *Vestibulum* should contain the materials for a child's conversation—a few hundred words, arranged in sentences, to which are added the declensions of nouns and the conjugations of verbs.

21. The *Janua* should contain all the common words in the language, about 8000 in number. These should be arranged in short sentences embodying descriptions of natural objects. To this there should be subjoined some short and clear grammatical rules, giving accurate directions for writing, pronouncing, forming, and using the words of the language.

22. The *Palatium* should contain diverse discourses on all matters, expressed in a varied and elegant style, with marginal references to the authors from which the several phrases are borrowed. At the end there should be given rules for altering and paraphrasing sentences in a thousand different ways.

23. The *Thesaurus* will be the name given to the classic writers who have written on any matter with serious intent and in a good style, with the addition of rules relating to the observation and collection of noteworthy passages and to the accurate translation (a most important matter) of idioms. Of these authors, some should be chosen to read in school; of others, a catalogue should be

formed, so that if any one desire to look up any subject in the authors who have written on it, he may be able to find out who they are.

24. By subsidiary books are meant those by whose help the school-books may be used with greater speed and with more result.

For the *Vestibulum* a small vocabulary, both Vernacular-Latin and Latin-Vernacular, should be provided.

For the *Janua* an etymological Latin-Vernacular dictionary, giving the simple words, their derivatives, their compounds, and the reason for the meanings attached.

For the *Palatium* a phraseological dictionary in the Vernacular, in Latin (and if necessary in Greek), forming a compendium of the various phrases, synonyms, and periphrases that occur in the *Palatium*, with references to the places where they are to be found.

Finally, for the completion of the *Thesaurus*, a comprehensive lexicon (Vernacular-Latin and Latin-Greek) which shall embrace, without exception, every point in each language. This should be carried out in a scholarly and accurate manner, care being taken that fine shades of meaning in the several languages be made to correspond, and that suitable parallels be found for idioms. For it is not probable that there exists any language so poor in words, idioms, and proverbs that it could not furnish an equivalent for any Latin expression, if judgment were used. At any rate, accurate renderings could be devised by any one who possessed sufficient skill in imitating, and in producing a suitable result from suitable material.

25. No such comprehensive dictionary has hitherto been produced. A Polish Jesuit, G. Cnapius, has, it is true, done good service to his countrymen by his work entitled *A Thesaurus of Polish, Latin, and Greek*; but in this work there are three defects. Firstly, the collection of vernacular words and phrases is incomplete. Secondly, he has not observed the order that we suggested above, since individual, figurative, and obsolete words are not arranged under separate headings, though in this way the

peculiarities, the elegances, and the resources of both languages equally would be illustrated. For he has given a number of Latin renderings for each word and phrase of Polish, while according to my plan only one, but that an exact equivalent, should be given. In this way, my dictionary would be of great service to those translating books from Latin into the vernacular, and *vice versa*. Thirdly, in Cnapius' *Thesaurus* there is a great lack of method in the arrangement of examples. These should not be carelessly heaped together. First, simple illustrations, drawn from history, should be given, then more ambitious ones taken from the orators, then the more complex and uncommon usages of poets, and finally the uses that are obsolete.

26. But a detailed account of this comprehensive dictionary must be left for another time, as must also the further particulars of the *Vestibulum*, the *Janua*, the *Palatium*, and the *Thesaurus*, by means of which languages can be acquired with unfailing accuracy. Of these it will be fitting to speak when we deal with the several classes in detail.

CHAPTER XXIII

THE METHOD OF MORALS

1. So far we have discussed the problem of teaching and learning the sciences and the arts with greater readiness. We should, however, bear in mind the remark of Seneca (*Epist.* 89): "We ought not to learn these things, but rather to have learned them." They are, indeed, nothing but a preparation for more important matters, and as he says, "our beginnings, and not our completed works." What then is our true work? It is that study of wisdom which elevates us and makes us steadfast and noble-minded—the study to which we have given the name of morality and of piety, and by means of which we are exalted above all other creatures, and draw nigh to God Himself.

2. We must therefore see how this art of instilling true virtue and piety may be elaborated on a definite system, and introduced into schools, that we may with justice be able to call them the "forging-places of humanity."

3. The art of shaping the morals is based upon the following sixteen fundamental rules :

(i.) All the virtues, without exception, should be implanted in the young.

For in morality nothing can be omitted without leaving a gap.

4. (ii.) Those virtues which are called cardinal should be first instilled ; these are prudence, temperance, fortitude, and justice.

In this way we may ensure that the structure shall not

be built up without a foundation, and that the various parts shall form a harmonious whole.

5. (iii.) Prudence must be acquired by receiving good instruction, and by learning the real differences that exist between things, and the relative value of those things.

A sound judgment on matters of fact is the true foundation of all virtue. Well does Vives say : "True wisdom consists in having a sound judgment, and in thus arriving at the truth. Thus are we prevented from following worthless things as if they were of value, or from rejecting what is of value as if it were worthless ; from blaming what should be praised, and from praising what should be blamed. This is the source from which all error arises in the human mind, and there is nothing in the life of man that is more disastrous than the lack of judgment through which a false estimate of facts is made. Sound judgment," he proceeds, "should be practised in early youth, and will thus be developed by the time manhood is reached. A boy should seek that which is right and avoid that which is worthless, for thus the practice of judging correctly will become second nature with him."

6. (iv.) Boys should be taught to observe temperance in eating and in drinking, in sleeping and in waking, in work and in play, in talking and in keeping silence, throughout the whole period of their instruction.

In this relation the golden rule, "Nothing in excess," should be dinned into their ears, that they may learn on all occasions to leave off before satiety sets in.

7. (v.) Fortitude should be learned by the subduing of self ; that is to say, by repressing the desire to play at the wrong time or beyond the proper time, and by bridling impatience, discontent, and anger.

The principle which underlies this is that we should accustom boys to do everything by reason, and nothing under the guidance of impulse. For man is a rational animal, and should therefore be led by reason, and, before action, ought to deliberate how each operation should be performed, so that he may really be master of his own

actions. Now, since boys are not quite capable of such a deliberate and rational mode of procedure, it will be a great advance towards teaching them fortitude and self-control if they be forced to acquire the habit of performing the will of another in preference to their own, that is to say, to obey their superiors promptly in everything "Those who train horses aright," says Lactantius, "first teach them to obey the reins," and he who wishes to instruct boys should commence by accustoming them to obey his orders. We may indeed cherish a hope that the turmoil with which the world is overwhelmed will be replaced by a better condition of affairs, if, in early youth, men learn to yield to one another and to be guided by reason in all that they do.

8. (vi.) The young should learn to practise justice by hurting no man, by giving each his due, by avoiding falsehood and deceit, and by being obliging and agreeable.

Boys must be trained to act in this way, as we said above, by the method prescribed in the following canons.

9. (vii.) The kinds of fortitude that are especially necessary to the young are frankness and endurance of toil.

For since life must be spent in intercourse with others and in action, boys must be taught to look men in the face and to meet honest toil without flinching. Otherwise they may become recluses and misanthropes, or idlers and cumberers of the earth. Virtue is practised by deeds and not by words.

10. (viii.) Frankness is acquired by constant intercourse with worthy people, and by behaving, while in their presence, in accordance with the precepts that have been given.

Aristotle educated Alexander in such a manner that, when twelve years of age, he could suit himself to every kind of society, to that of kings, of the ambassadors of kings and of nations, of learned and unlearned men, of townsmen, of countrymen, and of artisans, and could ask suitable questions or give suitable answers on any subject that arose in conversation. In order that the

young who are subjected to our comprehensive scheme of education may learn to imitate this, rules for conversation should be written, and the practice of them, by daily intercourse with tutors, schoolfellows, parents, and servants, should be insisted upon; masters also should take great care to correct any tendency to carelessness, forwardness, boorishness, or coarseness.

11. (ix.) Boys will learn to endure toil if they are continually occupied, either with work or with play.

It makes no difference what is done, or why it is done, if only the boy be occupied. Much can be learned in play that will afterwards be of use when the circumstances demand it. It is by working, therefore, that we must learn how to work, just as we learn how to act by acting (as we saw above); and in this way the continued occupations of mind and body, in which, at the same time, all over-pressure must be avoided, will produce an industrious disposition, and make a man so active that sluggish ease will be intolerable to him. Then will be seen the truth of Seneca's words: "It is toil that nourishes noble minds."

12. (x.) The cognate virtue of justice, or promptness and willingness to serve others, must be diligently cultivated in the young.

The abominable vice of selfishness is inherent in our corrupt nature, and through it each man thinks of nothing but his own welfare, and troubles his head about no one else. This is a great source of confusion in life, since all are occupied with their own affairs and neglect the common good. The true object of life must therefore be diligently instilled into the youth, and they must be taught that we are born not for ourselves alone, but for God and for our neighbour, that is to say, for the human race.

Thus they will become seriously persuaded of this truth and will learn from their boyhood to imitate God, the angels, the sun, and the more noble of things created, that is to say, by desiring and striving to be of service to as many as possible. Thus will the good fortune of private and of public life be assured, since all men will be

ready to work together for the common good, and to help one another. And they actually will do so if they have been properly taught.

13. (xi.) Virtue must be inculcated at a very early stage before vice gets possession of the mind.

For if you do not sow a field with good seed it will produce nothing but weeds of the worst kind. But if you wish to subdue it, you will do so more easily and with a better hope of success if you plough it, sow it, and harrow it in early spring. Indeed, it is of the greatest importance that children be well trained in early youth, since a jar preserves for a long time the odour with which it has been imbued when new.

14. (xii.) The virtues are learned by constantly doing what is right.

We have seen in chaps. xx. and xxi. that it is by learning that we find out what we ought to learn, and by acting that we learn to act as we should. So then, as boys easily learn to walk by walking, to talk by talking, and to write by writing, in the same way they will learn obedience by obeying, abstinence by abstaining, truth by speaking the truth, and constancy by being constant. But it is necessary that the child be helped by advice and example at the same time.

15. (xiii.) Examples of well-ordered lives, in the persons of their parents, nurses, tutors, and school-fellows, must continually be set before children.

For boys are like apes, and love to imitate whatever they see, whether good or bad, even though not bidden to do so; and on this account they learn to imitate before they learn to use their minds. By "examples," I mean living ones as well as those taken from books; in fact, living ones are the more important because they make a stronger impression. And therefore, if parents are worthy and careful guardians of domestic discipline, and if tutors are chosen with the greatest possible care, and are men of exceptional virtue, a great advance will have been made towards the proper training of the young in morals.

16. (xiv.) But, in addition to examples, precepts and rules of conduct must be given.

In this way imitation will be supplemented and strengthened (on this point the reader may refer to our remarks in chap. xxi. canon ix.). Rules of life should therefore be collected from Holy Scripture and from the sayings of wise men, and should deal with questions such as: "Why should we strive against envy?" "With what arms should we fortify ourselves against the sorrows and the chances of life?" "How should we observe moderation in joy?" "How should anger be controlled?" "How should illicit love be driven out?" and similar questions, according to the age of the pupil.

17. (xv.) Children must be very carefully guarded from bad society, lest they be infected by it.

For, owing to our corrupt nature, evil clings to us readily. The young must therefore be carefully shielded from all sources of corruption, such as evil society, evil conversation, and worthless books (for examples of vice, whether they make their entrance through the eyes or through the ears, are poison to the mind). And finally, sloth should be guarded against, lest through idleness the young be led to evil deeds or contract a tendency to indolence. The important thing is that they be kept continually employed either with work or with play. Idleness should never be permitted.

18. (xvi.) Since it is impossible for us to be so watchful that nothing evil can find an entrance, stern discipline is necessary to keep evil tendencies in check.

For our enemy Satan is on the watch not only while we sleep, but also while we wake, and as we sow good seed in the minds of our pupils he contrives to plant his own weeds there as well, and sometimes a corrupt nature brings forth weeds of its own accord, so that these evil dispositions must be kept in check by force. We must therefore strive against them by means of discipline, that is to say, by using blame or punishment, words or blows, as the occasion demands. This punishment should always be administered

on the spot, that the vice may be choked as soon as it shows itself, or may be, as far as is possible, torn up by the roots. Discipline, therefore, should ever be watchful, not with the view of enforcing application to study (for learning is always attractive to the mind, if it be treated by the right method), but to ensure cleanly morals.

But of discipline we will treat more particularly in chap. xxxi.

CHAPTER XXIV

THE METHOD OF INSTILLING PIETY

1. PIETY is the gift of God, and is given us from on high by our counsellor and guide, the Holy Spirit. But, since the Holy Spirit usually employs natural agencies, and has chosen parents, teachers, and ministers who should faithfully plant and water the grafts of Paradise (1 Cor. iii. 6-8), it is right that these should appreciate the extent of their duties.

2. We have already explained what we mean by piety, namely, that (after we have thoroughly grasped the conceptions of faith and of religion) our hearts should learn to seek God everywhere (since He has concealed Himself with His works as with a curtain, and, invisibly present in all visible things, directs all, though unseen), and that when we have found Him we should follow Him, and when we have attained Him should enjoy Him. The first we do through our understanding, the second through our will, and the third through the joy arising from the consciousness of our union with God.

3. We seek God by noticing the signs of His divinity in all things created. We follow God by giving ourselves up completely to His will, both to do and to suffer whatever shall have seemed good to Him. We enjoy God by so acquiescing in His love and favour that nothing in heaven or on earth appears to us more to be desired than God Himself, that nothing appears pleasanter to think of, and nothing sweeter than to sing His praises; thus our hearts are joined to His in love.

4. The sources from which we can draw this exaltation are three, and the manner in which we can draw from them is threefold.

5. These sources are Holy Writ, the world, and ourselves. The first is the Word of God, the second is His handiwork, and the third is inspired by Him. There is no doubt that we can derive the knowledge and the love of God from the Scriptures. The very heathen testify that piety can be derived from the world and from the wise contemplation of the marvellous works of God contained in it ; for they, by nothing but the contemplation of the world, were brought to revere the Godhead. This is shown by the examples of Socrates, Plato, Epictetus, Seneca, and others. But still, in the case of these men, to whom no special revelation from on high had been given, this feeling of love was imperfect, and wrongly directed. That those who seek to gain a knowledge of God from His word as well as from His works are filled with the deepest love for Him, is shown by the instances of Job, Elihu, David, and other pious men.

6. The manner of drawing piety from these sources is threefold : meditation, prayer, and examination.

"These three," says Luther, "make a theologian ; but indeed they are essential to make a true Christian."

7. Meditation is the constant, attentive, and devoted consideration of the works, the words, and the goodness of God ; the thoughtful acknowledgment that it is from the good-will of God alone (either active or permissive) that all things come, and that all the counsels of the divine will attain their end in the most marvellous ways.

8. Prayer is the frequent, or rather the continual, yearning after God, and the supplication that He may sustain us in His mercy and guide us with His Spirit.

9. Examination is the continual testing of our progress in piety, and may come from ourselves or from others. Under this head come human, devilish, and divine temptations. For men should examine themselves to see if they are faithful, and do the will of God ; and it is necessary that we should be tested by other men, by our friends, and

by our enemies. This is the case when those who are set over others are vigilant and attentive, and, by open or by secret scrutiny, try to find out what progress has been made; or when God places an adversary by our side to teach us to find our refuge in Him, and to show us how strong our faith is. Finally, Satan himself is sent by God, or comes against us of his own accord, that the state of our hearts may be made evident.

These three modes, therefore, must be instilled into the Christian youth, that they may learn to raise their hearts to Him who is the first and the last of all things, and may seek rest for their souls in Him alone.

10. The special method is contained in twenty-one rules.

(i.) Care should be taken to instil piety in early childhood.

For not to put off such instruction is advantageous, and to put it off is dangerous, since it is only reasonable to begin with what naturally comes first, and is the most important. But what is more important than piety? What else is profitable for all things, having promise of the life which now is, and of that which is to come? (1 Tim. iv. 8). This is the one thing needful (Luke x. 42), to seek the Kingdom of God, since all things shall be added to him who does so (Matt. vi. 33). To postpone this is hazardous, since, unless the mind be imbued with the love of God when young, it is easy for a silent contempt of the Godhead and for profanity to make their entrance, and when once they have done so, it is difficult, if not impossible, to dislodge them. Thus the prophet, complaining of the horrible impiety of his people, says that there are none left whom God can teach, save "them that are weaned from the milk and drawn from the breasts," that is to say, the young (Isaiah xxviii. 9), and another prophet says that it is impossible to convert to well-doing those that are accustomed to do evil (Jeremiah xiii. 23).

11. (ii.) Therefore, as soon as children can use their eyes, their tongues, their hands, and their feet, let them learn to

look towards heaven, to stretch their hands upwards, to utter the names of God and of Christ, to bend the knee before His unseen majesty, and to revere it.

It is not so difficult to teach these things to children as those imagine, who, not realising how important it is for us to tear ourselves away from Satan, from the world, and from ourselves, pay little consideration to a matter of such gravity. At first the children will not understand the true nature of what they are doing, since their intelligence is still weak ; but what is of importance is that they learn to do that which subsequent experience will teach them to be right. For, when they have got into the habit of acting as they should, it will be easier to explain to them why such conduct is good, and how it is best carried out. God has commanded to consecrate all first-fruits to Him ; why not, therefore, the first-fruits of our thoughts, of our utterances, of our movements, and of our actions ?

12. (iii.) While it is still possible to influence boys, it is of great importance to impress upon them that we are not here for the sake of this life, but are destined for eternity ; that our life on earth is only transitory, and serves to prepare us for our eternal home.

This can easily be taught by the examples of infants, boys, youths, and old men who are daily snatched away by death. These facts should be diligently impressed on the young, that they may realise how very transitory our life on earth is.

13. (iv.) They should also be taught that our only business on earth should be to prepare for the next world.

For it would be foolish to pay attention to those things which will be taken from us, and to neglect those things which will accompany us into eternity.

14. (v.) They should then be taught that the life to which men go when they leave this earth, is twofold : either a blessed life with God, or a wretched one in hell, and that both are everlasting.

This may be demonstrated by the example of Lazarus and the rich man ; for the soul of the former was carried

away by angels into heaven, while that of the latter was carried by devils into hell.

15. (vi.) And that those are thrice happy, who order their conduct in such a way that they are found worthy to stand in God's presence.

For apart from God, the source of light and of life, there is nothing but darkness, terror, agony, and everlasting death that knows no end ; so that it were better that they had never been born, who stray from God and cast themselves into the pit of eternal destruction.

16. (vii.) But that those who have communed with God on earth, will go to Him after death.

As did Enoch and Elias, both while living, and others also (Gen. v. 24).

17. (viii.) That those commune with God who keep Him continually before their eyes, fear Him, and fulfil His word.

And that this is the whole duty of man (Eccles. xi. 13), to which Christ referred when He said, "There is but one thing needful" (Luke x. 42). This is what Christians should ever have on their lips and in their hearts, lest, like Martha, they be too much engrossed with the cares of this life.

18. (ix.) They should, therefore, acquire the habit of referring to God all that they see, hear, touch, do, and endure on earth.

Instances of this should be given. Those, for instance (it may be pointed out), who devote themselves to letters and a life of contemplation, should do so with but one object in view, namely, that they may see in everything the power, the wisdom, and the goodness of God, that they may be filled with love for Him, and may unite themselves so fast to Him in love that they can never be torn away. Those, again, who are engaged in practical pursuits, such as agriculture or mechanics, these have to seek bread and the necessities of life ; but they should do so merely that they may live in decent comfort, and should strive to live thus solely that they may be enabled to serve God with a quiet and cheerful spirit, and that, by serving Him and proving acceptable to Him, they may be united with Him

eternally. Those who have other ends in view deviate from God's will and from God Himself.

19. (x.) From the very outset they should learn to find their chief occupation in those things that lead directly to God: in reading the Scriptures, in religious ceremonies, and in other good works.

For the perusal of the Scriptures renews and fosters our acquaintance with God, religious ceremonies create a link between God and man, and good works strengthen this link, for they show that we really observe the Word of God. These three should be seriously commended to all who are destined to lead a Godly life (as are all the Christian youth, dedicated to God through baptism).

20. (xi.) The Holy Scriptures must be the Alpha and the Omega of Christian schools.

Hyperius³¹ said that a theologian was born of the Scriptures, and we may find this observation at greater length in the Apostle Peter, who says that the sons of God are born of incorruptible seed, through the Word of God that liveth and abideth (1 Peter i. 23).

In Christian schools, therefore, God's Book should rank before all other books; that, like Timothy, all the Christian youth may, from boyhood, know the sacred writings which are able to make them wise unto salvation (2 Tim. iii. 15), and may be nourished in the words of the faith (1 Tim. iv. 6). On this subject Erasmus has written well in his *Paraclesis, or Exhortation to the Study of Christian Philosophy*. "The Holy Scripture" (he says) "is equally suitable to all, is within the capacity of little ones, nourishes them with milk, cherishes them, sustains them, and does all for them until they grow up in Christ. But, while it can be comprehended by the lowest intelligences, it is none the less an object of wonder to the highest. There is no age, no sex, no rank of life to which it is unsuitable. The sun is not more the common property of mankind than is the teaching of Christ. It rejects none save those who hold themselves at a distance." He continues, "Would that it were translated into all languages,

that it might be known by the Turks and the Saracens, and by the Scotch and the Irish as well. Many would mock, it is true, but some would be won over. Would that the ploughman might sing it at his plough, that the weaver might repeat it at his loom, that the traveller might beguile the tedium of the journey by its sacred story, and that the conversations of Christians were taken from its pages; for our daily conversation represents our true character. Let each one get and read as much of Holy Writ as he can. Let him who is behind not envy him who is in front. Let him who is in front beckon forward him who is behind, and despise him not. Why do we confine to a few the book that contains the faith of all?" And near the end, "May all whom we have dedicated to Christ in baptism be imbued with His teaching while in the arms of their parents and among the caresses of their nurses. For that which the mind first drinks in, sinks deepest and remains longest. Let our first babbling be of Christ, and let our infancy be modelled upon His Evangelists, which should be set before boys in such a way that they may like them. In these studies they should be trained, until by a silent increase they develope into men, whose strength is in Christ. Happy is he whom death snatches away while engaged on this study. Let us all, therefore, drink in God's Word with our whole hearts, let us embrace it, let us die while occupied with it, let us be converted into it, since our morals are so intimately connected with our studies." In his *Compendium of Theology* also he says: "In my opinion, it would not be a waste of time to learn the Holy Book off by heart, even though we did not understand it, as says St. Augustine."

Christian schools, therefore, should resound not with Plautus, not with Terence, not with Ovid, not with Aristotle, but with Moses, David, and Christ, and methods should be devised by which the Bible may be given to children dedicated to God (for all the children of Christians are holy) (1 Cor. vii. 14) as a means of learning their A B C; for thus they would grow familiar with it. For as

language is made up of the sounds and the symbols of letters, thus is the whole structure of religion and piety formed out of the elements of Holy Scripture.

21. (xii.) Whatever is learned from Scripture should convey a lesson of faith, charity, and hope.

These are the three noblest dispositions, and to these everything that God has seen good to reveal to us in His Word has reference. For he reveals some things to us that we may believe them, others He commands us that we may do them, and others again He promises that we may expect them from His mercy, both in this and in the future world. In the whole Bible nothing occurs that cannot be brought under one of these heads. All, therefore, should be taught to understand and to read intelligently what God has revealed.

22. (xiii.) Faith, charity, and hope should be taught for practical use.

From the very beginning it is necessary to form practical and not theoretical Christians, if we wish to form true Christians at all. For religion is a real thing and not a reflection of reality, and should prove its reality by the practical results that it produces, just as a seed that is planted in good earth soon germinates. Hence the Scripture requires a "working faith" (Gal. v. 6), calls faith apart from works "barren" (James ii. 20), and asks for a "living hope" (1 Peter i. 3). Hence the constant injunction, that things are revealed from on high that we should do them. Christ also says: "If ye know these things, blessed are ye if ye do them" (John xiii. 17).

23. (xiv.) Faith, charity, and hope will be taught in a practical manner, if boys and all men are taught to believe implicitly in all that God reveals, to do all that He commands, and to expect all that He promises.

It should be carefully impressed on the young that, if they wish the Word of God to supply them with divine strength, they should bring to it a humble and devoted heart, prepared to submit itself to God on all occasions, and actually doing so at the time. The sunlight reveals

nothing to him who refuses to open his eyes, nor can a banquet satisfy him who refuses to eat ; and in the same way the divine light supplied to our minds, the rules given for our actions, and the happiness promised to those who fear God, are all in vain unless they are received with prompt faith, earnest charity, and firm hope. Thus, Abraham, the father of the faithful, trusted the Word of God and believed things incredible to the reason ; obeyed the commands of God, no matter how hard they were (when bidden leave his native land and sacrifice his son) ; and hoped for things that seemed impossible, trusting in the promises of God—which living and active faith was counted to him for righteousness. All, therefore, who devote themselves to God, should be taught to fulfil these duties in their own persons.

24. (xv.) Whatever is taught to the young in addition to the Scriptures (sciences, arts, languages, etc.) should be taught as purely subordinate subjects. In this way it will be made evident to the pupils that all that does not relate to God and to the future life is nothing but vanity.

Socrates is praised by the ancients because he turned philosophy from its barren and thorny speculations and brought it to bear on the province of morals. The Apostles professed to recall Christians from the thorny questions of the law and to lead them to the sweet charity of Christ (1 Tim. i. 5 *seq.*), and in the same way many modern theologians urge us to leave confused controversies, that destroy the Church far more than they build it up, and to attend to our own consciences and the practice of piety. O that God would have pity on us, that we might find some universal method by which all that occupies the mind of man might be brought into relation with God, and that we might learn to convert the business of this life, in which all mankind is immersed, into a preparation for the life to come ! This would, indeed, be a sacred ladder on which our minds might mount to the eternal protector of all things, to the source of true happiness.

25. (xvi.) All should be taught to reverence God both

inwardly and outwardly. For inward without outward reverence tends to grow faint, while outward without inward reverence degenerates into hypocrisy.

The outward worship of God consists in conversing about Him, in preaching and hearing His Word, in adoring Him on bended knee, in singing His praises in hymns, and in attending to the Sacraments and the other services of the Church, public and private. The inward worship of God consists of continual meditation on the divine presence, of fearing and loving God, of abnegation and resignation of self, and of the ready will to do or to suffer all that God desires. These two forms of worship must be joined together, and not torn asunder; not only because it is right that God should be glorified in our bodies and in our minds, which belong to Him (1 Cor. vi. 20), but also because they cannot be separated without danger. Outward ceremonies without inward truth are an abomination to God, who says: "Who demands these things from you?" (Isaiah i.), "for He is a spirit and must be worshipped in spirit and in truth" (John iv.). But, since we are not merely spirits but have bodies and senses as well, it is necessary for our senses to be outwardly stimulated, that we may inwardly do what is right in spirit and in truth. On this account God, though He lays more stress on inward worship, ordained outward ceremonies and wishes them to be observed. Christ freed the worship of the New Testament from ceremony and taught that God should be worshipped in spirit and in truth, yet He Himself bent His head when He prayed to His Father, and continued His prayer for nights together; used to attend religious meetings, heard and questioned the doctors of the law, preached the Word, and sang hymns. Therefore when we educate the young, we should educate them thoroughly, externally and internally, since otherwise we may produce either hypocrites, that is to say, superficial, fraudulent, and false worshippers of God, or fanatics, who delight in their own visions, and through their contempt of outward form undermine the Church, or, finally, luke-

warm Christians, in whom the stimulus of external or the reality of internal worship is wanting.

26. (xvii.) Boys should be carefully habituated to the outward works which are commanded by God, that they may know that it is true Christianity to express faith by works.

Such works are the exercise of temperance, justice, pity, and patience, which should continually occupy our attention. "For, unless our faith brings forth such fruit it is manifestly dead" (James ii.). But it must be living if it is to bring us salvation.

27. (xviii.) They should also learn to distinguish carefully the objects of the blessings and of the judgments of God, that they may make a good use of them.

Fulgentius³² (Letter II. to Gallas) divides the blessings of God into three classes. According to him, some are to last for ever, others are to help us to attain eternity, while others are only for the use of this present life. Of the first kind are the knowledge of God, the joy of the Holy Spirit, and the love of God that fills our hearts. Of the second kind are faith, hope, and compassion for our neighbours. Of the third kind are health, riches, friends, and the other external goods that of themselves make us neither happy nor unhappy.

In the same way the judgments or chastisements of God are of three kinds. Some (whom God wishes to spare in the life everlasting) are seized on earth and are tortured that they may be purified and whitened (Dan. xi. 35 ; Rev. vii. 14), as was the case with Lazarus. Others are spared here that they may be punished in eternity, as was the Rich Man. While the punishments of others begin here and are continued in eternity, as is the case with Saul, Antiochus, Herod, Judas, etc.

Men, therefore, must be taught to distinguish all these from one another, that they may not be deceived by the good things of the flesh and give precedence to what is transitory, that they may realise that present ills are less to be feared than hell-fire, and "that they should not fear

those who can only kill the body and have no further power, but Him who can destroy the body and can also thrust the soul down to hell" (Luke xii.).

28. (xix.) They should also be told that the safest path of life is the path of the Cross; that Christ the King of Life has trodden it before us, and invites to it and leads along it those whom He loves best.

The mystery of our salvation was consummated on the Cross and depends on the Cross; for by it the old Adam was slain that the new Adam, fashioned after God's image, might live. Those, therefore, whom God loves, He chastises and crucifies with Christ, that when they rise with Christ He may set them on His right hand in heaven. Now, though this lesson of the Cross tells the power of God to save those who believe, to the flesh it is foolishness and an offence (1 Cor. i. 18). It is therefore very necessary to teach this lesson to Christians with great care, that they may understand that they cannot be the disciples of Christ unless they deny themselves, bear the Cross of Christ on their shoulders (Luke xiv. 26), and are prepared throughout their whole lives to follow God wherever He may lead them.

29. (xx.) Care must be taken that, while all this is being taught, no conflicting examples come in the way.

That is to say, the boys must not hear or see blasphemies, perjuries, or other acts of impiety, but, whichever way they turn, should encounter nothing but reverence for the Deity, observance of religion, and conscientiousness. Evil conduct, also, whether at home or at school, should always be severely punished, and, if the punishment for profanity be always greater than for offences against Priscian³³ or for other faults, it will be impressed upon them that the former error is the more important to guard against.

30. (xxi.) In this corrupt state of the world and of human nature we never make as much progress as we ought, or, if we do advance, are filled with complacency and spiritual pride, through the depravity of our flesh.

Now this is a very great danger (for God resists the proud), and therefore all Christians should be taught in

their youth that our endeavours and our works are of no avail, unless Christ, the Lamb of God who takes away the sins of the world, help us with His perfection. On Him we must call and Him we must trust.

We shall thus have finally placed the hope of our salvation in safety, when we have laid the burden on Christ, the corner-stone. For He is the culminating point of all perfection in heaven and on earth, and is the one and only originator and guardian of our faith, our charity, our hope, and our salvation. For this reason God sent Him from heaven that he might become Immanuel (or God in man) and unite all men in God, and that, living with purity in the life which He had assumed, He might give men the example of a divine life; that by His innocent death He might expiate the sins of the world in His person, and might wash us clean with His blood; that He might show His victory over death by His resurrection, and ascending into heaven might send the Holy Ghost, the pledge of our salvation; and that He might thus rule us and preserve us, and, finally, take us to Himself, that we may be with Him and see His glory.

31. Thus to the eternal Saviour of all men, with the Father and the Holy Ghost, be praise, and honour, and blessing, and glory, for evermore. Amen.

32. It remains to draw up a detailed method for the several classes.

CHAPTER XXV

IF WE WISH TO REFORM SCHOOLS IN ACCORDANCE WITH THE LAWS OF TRUE CHRISTIANITY, WE MUST REMOVE FROM THEM BOOKS WRITTEN BY PAGANS, OR, AT ANY RATE, MUST USE THEM WITH MORE CAUTION THAN HITHERTO.³⁴

1. RESISTLESS necessity compels us to treat at length a subject which we have touched on in the previous chapter. If we wish our schools to be truly Christian schools, the crowd of Pagan writers must be removed from them. First, therefore, we will set forth the reasons which underlie our views, and then the method of treating these ancient writers so that, in spite of our caution, their beautiful thoughts, sayings, and deeds may not be lost to us.

2. Our zeal in this matter is caused by our love of God and of man; for we see that the chief schools profess Christ in name only, but hold in highest esteem writers like Terence, Plautus, Cicero, Ovid, Catullus, and Tibullus. The result of this is that we know the world better than we know Christ, and that, though in a Christian country, Christians are hard to find. For with the most learned men, even with theologians, the upholders of divine wisdom, the external mask only is supplied by Christ, while the spirit that pervades them is drawn from Aristotle and the host of heathen writers. Now this is a terrible abuse of Christian liberty, a shameless profanation, and a course replete with danger.

3. Firstly, our children are born for heaven and are

reborn through the Holy Ghost. They must therefore be educated as citizens of heaven, and their chief instruction should be of heavenly things, of God, of Christ, of the angels, of Abraham, of Isaac, and of Jacob. This instruction should take place before any other, and all other knowledge should be shielded from the pupil; firstly, because of the uncertainty of life, that no one may be snatched away unprepared, and secondly, because first impressions are the strongest, and (if they are religious impressions) lay a safe foundation for all that follows in life.

4. Secondly, God, though He made provision of every kind for His chosen people, gave them no school other than His own Temple, where He Himself was the Master, we were the pupils, and His oracles were the subject taught. For thus He speaks by Moses: "Hear, O Israel, the Lord our God is one God: and thou shalt love the Lord thy God with all thine heart, and with all thy soul, and with all thy might. And these words, which I command thee this day, shall be upon thine heart; and thou shalt teach them diligently unto thy children, and shalt talk of them when thou sittest in thine house, and when thou walkest by the way, and when thou liest down, and when thou risest up" (Deut. vi. 4). And by Isaiah: "I am the Lord thy God, which teacheth thee to profit, which leadeth thee by the way that thou shouldst go" (xlviii. 17); and again, "Should not a people seek unto their God?" Christ also says: "Search ye the Scriptures" (John v. 39).

5. God has shown by the following words that His voice is the brightest light for our understanding, the most perfect law for our actions, and the surest support for our weakness. "Behold, I have taught you statutes and judgments! Keep therefore and do them; for this is your wisdom and your understanding in the sight of the peoples, which shall hear all these statutes and say: Surely this great nation is a wise and understanding people" (Deut. iv. 5, 6). To Joshua, also, He speaks thus: "This book of the law shall not depart out of thy

mouth, but thou shalt meditate therein day and night. For then thou shalt make thy way prosperous and thou shalt have good success" (Jos. i. 8). By David also He says: "The precepts of the Lord are right, rejoicing the heart: the commandment of the Lord is pure, enlightening the eyes" (Psalm xix. 8). Finally, the Apostle bears witness "that every scripture inspired of God is profitable for teaching, etc., that the man of God may be complete" (2 Tim. iii. 16, 17). The wisest of men (by this I mean truly enlightened Christians) have made the same assertion. Chrysostom has said: "What it is needful to know, and what it is not needful to know, *that* we can learn from the Scriptures." And Cassiodorus³⁵ says: "The Scriptures are a heavenly school, a guide through life, the only true source of information. To search for the true meaning of them should occupy the student's whole time, and leave him no leisure to be led astray by philology."

6. God expressly forbade His chosen people to have anything to do with the learning or the customs of the heathen: "Learn not the way of the nations" (Jer. x. 2); and again, "Is it because there is no God in Israel that ye go to inquire of Baalzebub the God of Ekron?" (2 Kings i. 3); "Should not a people seek unto their God? on behalf of the living should they seek unto the dead? To the law and to the testimony! if they speak not according to this word, surely there is no morning for them" (Isaiah viii. 19, 20). And why? Surely because "all wisdom cometh from the Lord, and is with him for ever. To whom else hath the root of wisdom been revealed?" (Ecclesiasticus i. 1, 6); "Although they have seen light and dwelt on the earth, the way of knowledge have they not known. Nor understood the paths thereof, etc. It hath not been heard of in Chanaan, neither hath it been seen in Theman. The Agarenes that seek wisdom upon earth, the authors of fables and searchers out of understanding, have not known the way of wisdom. But he that knoweth all things knoweth it and hath found out all the way of knowledge and hath

given it unto Jacob his servant and Israel his beloved" (Baruch iii. 20, 21, 22, 23, 32, 36, 37); "He hath not dealt so with any nation, and as for his judgments, they have not known them" (Psalm cxlvii. 20).

7. Whenever His people went aside from His laws to the snares of man's imagination, God used to blame not only their folly in forsaking the fountain of wisdom (Baruch iii. 12), but the twofold evil that they had committed, in forsaking Him, the fountain of living waters, and hewing them out broken cisterns that could hold no water (Jer. ii. 13). Through the agency of Hosea He complained also that His people held too much intercourse with other nations, saying: "Though I write for him my law in ten thousand precepts, they are counted as a strange thing" (Hos. viii. 12). But, I ask, is not this what those Christians are doing who hold heathen books in their hands night and day, while of the sacred Word of God they take no account, as if it did not concern them? And yet, as God bears witness, it is no vain thing, but our very life (Deut. xxxii. 47).

8. Therefore the true Church and the true worshippers of God have sought for no teaching other than the Word of God, from which they have drawn the true and heavenly wisdom that is superior to all earthly knowledge. Thus David says of himself: "Thy commandments make me wiser than mine enemies," and, "I have more understanding than all my teachers, for thy testimonies are my meditation" (Psalm cxix. 98, 99). Similarly Solomon, the wisest of mortals, confesses: "The Lord giveth wisdom; out of his mouth cometh knowledge and understanding" (Prov. ii. 6). The son of Sirach also testifies (in the prologue to his book) that his wisdom is drawn from the law and the prophets. Hence the exultation of the righteous when they see light in the light of God (Psalm xxxvi. 9); "O Israel, happy are we: for things that are pleasing to God are made known unto us" (Baruch vi. 4). "Lord, to whom shall we go? thou hast the words of eternal life" (John vi. 68).

9. The examples of all ages show us that it has been an occasion for stumbling whenever the Church has turned aside from the fountain of Israel. Of the Jewish Church, sufficient is known from the lamentations of the Prophets. As regards the Christian Church, we learn from history that a pure faith lasted as long as the Gospel, and nothing else, was preached by the Apostles and their successors. But as soon as the heathen entered the Church in numbers, and the ardour that existed at first grew cold, pagan books were read, at first in private and then in public, and the result was a great confusion of doctrine. The key of knowledge was lost by the very men who boasted that they alone possessed it, and from that time opinions without number were substituted for the articles of faith. Then did strife arise, whose end is not yet visible; charity grew cold, and piety disappeared. And thus, under the name of Christendom, paganism came into existence again, and still reigns supreme. For the threat of the Lord Jehovah had to be fulfilled: "If they speak not according to the Word of God, surely there is no morning for them" (Isaiah viii. 20). "Therefore the Lord hath poured out upon them the spirit of sleep, and hath closed their eyes, that all vision might become unto them as the words of a book that is sealed," because they worshipped God in accordance with the teaching of man (Isaiah xxix. 10, 11, 13, 14). O, how truly in their case is fulfilled what the Holy Spirit says of the heathen philosophers: "They became vain in their reasonings, and their senseless heart was darkened" (Rom. i. 21). In short, if the Church is to be purified from uncleanness, there is only one way, and that is to put aside all the seductive teaching of man and return to the pure springs of Israel, and thus to give over ourselves and our children to the teaching and guidance of God and of His word. Thus at last will the prophecy come to pass, "And all thy children shall be taught of God" (Isaiah liv. 13).

10. Indeed our dignity as Christians (who have been made sons of God and heirs of the kingdom of heaven

through Christ) does not permit us to degrade ourselves and our children by allowing them to have an intimate acquaintance with pagan writers, and to read them with such approval. We do not choose parasites, fools, or buffoons, but serious, wise, and pious men as tutors for the sons of our kings and princes. Should we not blush, therefore, when we confide the education of the sons of the King of kings, of the brothers of Christ and heirs of eternity, to the jesting Plautus, the lascivious Catullus, the impure Ovid, that impious mocker at God, Lucian, the obscene Martial, and the rest of the writers who are ignorant of the true God? Those who, like them, live without the hope of a better life, and wallow in the mire of earthly existence, are certain to drag down to their own level whoever consorts with them. Christians, we have carried our folly far enough! Let us pause here. God calls us to better things, and it is good to obey His call. Christ, the eternal Wisdom of God, has opened a school for the sons of God in His own house; in which the supreme control is exercised by the Holy Spirit, and the professors and masters are the Prophets and the Apostles, all endowed with true wisdom, and all holy men, who, by their teaching and example, point out the way of truth and of salvation; where the pupils are the elect of God, the first-fruits of men, ransomed by God and by the Lamb; where the inspectors and guardians are the angels and archangels, the principalities and powers in heaven (Eph. iii. 10); and where true wisdom, which is of use to us in this world and the next, is taught on all subjects that the mind of man can grasp. For the mouth of God is the fountain from which all the streams of wisdom flow; the countenance of God is the torch from which the rays of true light are scattered; the Word of God is the root from which spring the shoots of true wisdom. Happy are they, therefore, who look on the face of God, listen to His words, and receive His sayings in their hearts. For this is the only true and infallible way to attain the true and eternal wisdom.

11. Nor can we omit all mention of the earnestness with which God forbade His people to have anything to do with the works of the heathen, and of the consequences that followed their disregard of His injunction: "The Lord will consume those nations from thy sight. But the graven images of their gods shall ye burn with fire. Thou shalt not covet the silver or gold that is on them, nor take it unto thee, lest thou be snared therein, for it is an abomination to the Lord thy God; and thou shalt not bring an abomination into thine house, and become a devoted thing like unto it" (Deut. vii. 22, 25, 26). And again: "When the Lord thy God shall cut off the nations from before thee, take heed to thyself that thou be not ensnared to follow them, after that they be destroyed from before thee, and that thou inquire not after their gods, saying, How do these nations serve their gods? But what thing soever I command you, that shall ye observe to do; thou shalt not add thereto nor diminish from it" (Deut. xii. 29). After their victory Joshua reminded them of this, and advised them to remove the idols (Jos. xxiv. 23); but they did not obey him, and these heathen productions became a snare for them, so that they continually fell into idolatry until both kingdoms were overthrown. Should not we, therefore, take warning by their example, and avoid their error?

12. "But books are not idols," some one will say. I reply: They are the works of the heathen, whom God has destroyed from before the face of His Christian people, as He did of old. Nay, they are more dangerous than idols. For these only led away those who were fools at heart (Jer. x. 14), while books deceive even the wisest (Col. ii. 8). The former were works of men's hands (as God used to say when chiding the folly of the idolaters), the latter are the works of the human understanding. The former dazzled the eyes by the brilliancy of their gold and silver, the latter blind the intelligence by the plausibility of their carnal wisdom. Do you still deny that pagan books are idols? What was it that led the Emperor Julian away

from Christ? What was it that so undermined the understanding of Pope Leo X. that he believed the history of Christ to be a mere fable? Under what influence did Cardinal Bembo³⁶ dissuade Sadoletto from reading the Bible (saying that such folly was unsuitable for so great a man)? What is it that in these days leads so many learned Italians and others towards Atheism? Would that there were none in the reformed Church of Christ who have been drawn away from the Scriptures by Cicero, Plautus, and Ovid, writers that reek of death.

13. But it may be said: The abuse must be attributed not to the things, but to the persons. There are pious Christians to whom no harm is done by reading pagan authors. The Apostle replies: "We know that no idol is anything in the world: howbeit in all men there is not that knowledge (that is to say, the power of discerning). Take heed lest this liberty of yours become a stumbling-block to the weak" (1 Cor. viii. 4, 7, 9).

Now God in His mercy preserves many from destruction, and there is no excuse for us if, knowingly and willingly, we have anything to do with such snares (I mean the divers inventions of the human mind or of Satan's cunning), since it is certain that some, nay most men, are unhinged by them and are led into Satan's net. Let us rather obey God and not bring idols into our house, nor set up Dagon by the Ark of the Covenant, nor mingle the wisdom that is from on high with that which is earthly, bestial, and devilish, nor give any occasion for stirring up the anger of God against our sons.

14. Of a precisely similar nature was the event that Moses uses as an illustration. Nadab and Abihu, the sons of Aaron, and young priests (in ignorance of their duty), filled their censers with common, instead of with sacred, fire. For this they were smitten with fire by God, and died (Levit. x. 1). Now what are the children of Christians but a holy priesthood to offer up spiritual sacrifices to God? (1 Peter ii. 5). If we fill their censers, their minds, with strange fire, are we not handing them over to the

anger of God? For to a Christian soul all is strange, and should be strange, that has any other source than the Holy Spirit; and of such a kind are the ravings of the heathen philosophers and poets, as the Apostle bears witness (Rom. i. 21, 22; Col. ii. 8, 9). Not without reason did Jerome call poetry the wine of devils; since it intoxicates the incautious and sends them to sleep, and, while they sleep, plies them with monstrous opinions, dangerous temptations, and the foulest desires. We should therefore be on our guard against these philtres of Satan.

15. If we do not obey the wise counsels of God, the Ephesians will stand in judgment against us, for they, as soon as the light of divine wisdom shone upon them, burnt all their curious books, since these were henceforth useless to them as Christians (Acts xix. 19). The modern Greek Church also, although there exist the most excellent philosophical and poetical works, written by the Greeks of old, who were reputed the wisest of men, has forbidden its followers to read them under pain of excommunication. The result of this is that, although with the invasion of barbarism they have fallen into great ignorance and superstition, God has hitherto preserved them from being carried away by anti-Christian error. In this matter, therefore, we ought to imitate them, that (greater stress being laid on the reading of Scripture) the heathen darkness, which still remains, may be removed, and that in the light of God we may see light (Psalm xxxvi. 9). "O house of Jacob, come ye, and let us walk in the light of the Lord" (Isaiah ii. 5).

16. Let us now see by what reasonings the mind of man rebels against these injunctions, and winds about like a snake, seeking to avoid the necessity of obeying the Faith and serving God. The arguments used are as follows:

17. (i.) Great wisdom is to be found in the philosophers, the orators and the poets. I answer: Those are worthy of darkness who turn away their eyes from the light. Twilight is as mid-day to the owl, but animals, that are accustomed to light, think otherwise. O foolish men who

look for light in the darkness of the human reason ! Lift up your eyes on high. The true light comes from heaven, from the Father of Light ! Any light that is visible in human efforts arises from a few sparks that seem to shine because of the darkness that surrounds them ; but what are a few sparks to us, in whose hands a blazing torch has been placed (the effulgent word of God) ? If men investigate natural phenomena, they do but set the glass to their lips, without touching the wine ; while in the Scriptures the Ruler of the Universe Himself recounts the mysteries of His works, and explains the nature of things created, visible and invisible. When the philosophers talk of morals, they are like birds that have been caught with quicklime, for they make great efforts to move without making any advance. But the Scriptures contain true descriptions of the virtues, with keen exhortations that pierce to the marrow. When pagan writers wish to teach piety, they merely teach superstition, since they are not imbued with the true knowledge of God or of His will. " For, behold, darkness shall cover the earth, and gross darkness the peoples : but the Lord shall arise upon thee, and his glory shall be seen upon thee " (Isaiah lx. 2). Now the sons of light should be at liberty to journey to the sons of darkness, that, having seen what a difference there is, they may rejoice the more in the path of light, and may feel compassion for the darkness of their neighbours ; but to wish to exalt their glimmer above our own light is intolerable, and an insult to God and to our souls. " Of what advantage is it," says Isidor,³⁷ " to be learned in human doctrine, and know nothing of divine ? to follow perishable inventions, and despise heavenly mysteries ? If we love the Scriptures we must avoid those books that outwardly are eloquent and well written, but inwardly lack wisdom." What a condemnation of such books ! They are husks without kernels. Such was also the opinion of Philip Melancthon : " What do the best philosophers teach but self-confidence and self-love ? Cicero in his *De Finibus* estimates each kind of virtue with reference to self-love. How much pride and haughtiness

there is in Plato! It seems to me that a self-sufficient character must inevitably imbibe faulty instincts from the ambition that pervades his writings. The teaching of Aristotle is nothing but one long struggle to prove himself worthy of a good place among the writers on practical philosophy" (*System of Theology*).

18. (ii.) Again it is said: If they do not teach theology rightly, at any rate they teach philosophy, and this cannot be learned from the sacred writings, that have been given us for our salvation. I answer: The Word of God most high is the fountain of wisdom (Ecclesiasticus i. 5). True philosophy is nothing but the true knowledge of God and of His works, and this cannot be learned better than from the mouth of God Himself. For this reason St. Augustine, praising the Holy Scripture, says: "Here is philosophy, since the cause of everything that exists is in the Creator. Here are ethics, since a good and honest life can only be formed if those things are loved which ought to be loved, that is to say, God and our neighbour. Here is logic, since truth, the light of the rational soul, is God Himself. Herein is the salvation of the state; for the state can never be well guarded, or rest on a foundation of confidence and peace, unless the common good be loved, and this, in its highest and truest sense, is God." Recently, too, it has been pointed out by many that the foundations of all the sciences and philosophic arts are contained in Scripture, and more truly than elsewhere, so that the part played by the Holy Spirit in our education is indeed wonderful. For, though its first object is to instruct us in things invisible and eternal, it nevertheless unfolds the laws of nature and of art at the same time, teaching us how to reason wisely on all subjects and how to apply our reason in a practical manner. Yet of all this there is but a trace in the works of the pagan philosophers. A writer on theology has said that the marvellous wisdom of Solomon consisted in bringing the law of God into the families, the schools, and the public places, and there is no reason why the wisdom of Solomon, that

is to say, true and heavenly wisdom, should not once more be ours, if we give our children the Word of God instead of pagan books, and thus supply them with counsels for all the chances of life. Our object, therefore, should be to have in our homes that which can make us wise, even in that external or worldly wisdom that we call philosophy. Those were luckless times when the children of Israel had to go down to the Philistines to polish each man his plough, his mattock or his axe, because there was no smith in the land of the Israelites (1 Sam. xiii. 19, 20). But it is surely not necessary that the resources of the Israelites should always be limited in this way; especially as the arrangement was a bad one, for the following reason: the Philistines supplied the Israelites with harrows, but on no account would they supply them with swords that might be used against themselves. From the pagan philosophers, in the same way, you can get the well-known syllogisms and flowers of speech, but from this source you will find it impossible to procure swords and spears with which to combat impiety and superstition. Let us then hope for the times of David and of Solomon, when the Philistines were laid low but Israel reigned and rejoiced in its good fortune.

19. (iii.) But, for the sake of style, students of Latin should read Terence, Plautus, and similar writers. I answer: Are we to bring our children into ale-houses, cook-shops, taverns, and other dens of iniquity, in order that they may learn how to speak? For, I ask you, is it not into such unclean places that Terence, Plautus, Catullus, Ovid, and the rest of them lead our young? What do they set before them but jesting, feasting, drunkenness, amours, and deceits, from which Christians should avert their eyes and ears, even if they encounter them by chance? Is the natural man not depraved enough, that it is necessary to bring to him and to show to him all manner of wickedness, and, as it were, to seek out opportunities to hurl him to destruction? But it will be said: "The matter in those authors is not all bad." I answer: Evil sticks far more readily than good, and it is therefore a very dangerous

practice to send the young to a spot where good and evil occur in combination. If we wish to poison any one, we do not give him poison alone, but mix it with some pleasant drink, the presence of which does not interfere with the action of the poison. This is precisely the way in which these men-destroyers of old mixed their hellish poisons with cunning inventions and with elegance of style; and are we to remain conscious of their devices and not strike the potion from their hands?

Some one else may object: "They are not all lascivious writers. Cicero, Virgil, Horace, and others are serious and earnest." I answer: None the less they are blind pagans, and turn the minds of their readers from the true God to other gods and goddesses (Jove, Mars, Neptune, Venus, Fortune, etc.), though God has said to His people: "Make no mention of the name of other gods, neither let it be heard out of thy mouth" (Exodus xxiii. 13). Then what a chaos of superstitions, of false opinions, of earthly desires at variance with one another, is to be found in these writers! The spirit with which they fill their readers must be very different from that of Christ. Christ calls us from the world, they plunge us into the world. Christ teaches self-abnegation, they teach self-love. Christ teaches us to be humble, they to be magnanimous. Christ demands meekness, they inculcate self-assertion. Christ bids us be simple as doves, they show us how to turn an argument in a thousand different ways. Christ urges us to modesty, they spend their time in mocking others. Christ loves those who believe easily, they prefer those who are suspicious, argumentative, and obstinate. To conclude briefly and in the words of the Apostle: "What communion hath light with darkness? and what concord hath Christ with Belial? or what portion hath a believer with an unbeliever?" (2 Cor. vi. 15). Rightly does Erasmus say: "Bees avoid withered flowers; and no book, the contents of which are impure, should be opened." And again: "It is safest to sleep on clover, for it is said that no serpents lurk in it, and on the same

principle we should confine ourselves to those books in which no poison is to be feared."

20. Moreover, what attraction have these pagan authors that is not to be found in our sacred writers? Are they the only people who understand the elegances of style? The most perfect master of language is he who gave it to us, the Holy Spirit. His words are sweeter than honey and more piercing than a two-edged sword; more active than the fire that liquefies metals, and weightier than a hammer which grinds rocks to powder, for they tell us of God. Is it heathen writers alone who relate marvellous events? Our Scriptures are full of events that are truer and far more wonderful. Are they the only authors who can fashion figures of speech, and riddling sayings, or write passages that are forcible and pithy? Our Scriptures are full of such passages. Leprous is his imagination who prefers Abana and Pharpar, rivers of Damascus, to Jordan and the waters of Israel (2 Kings v. 12). Blind is the eye to which Olympus, Helicon, and Parnassus seem more beautiful than Sinai, Sion, Hermon, Tabor, and Olivet. Deaf is the ear to which the lyre of Orpheus, of Homer, or of Virgil sounds sweeter than David's lute. Corrupt is the palate to which Nectar, Ambrosia, and the Castalian springs taste better than celestial Manna and the fountains of Israel. Perverse is the heart that finds more pleasure in the names of the gods, the goddesses, the muses, and the graces than in the adorable names of Jehovah, of Christ the Saviour, and of the Holy Ghost. Blind is the hope that wanders through the Elysian fields in preference to the gardens of Paradise. With them all is romance, a mere shadow of truth, while with us all is reality and the very essence of truth.

21. But it will be said: These writers contain elegances of speech and moral sentiments that are worthy of our adoption. Is not this a sufficient reason for sending our children to them? Should we not spoil the Egyptians and strip them of their raiment? Does not God bid

us do so? (Exodus iii. 22). It is the right of the Church to usurp all the possessions of the heathen. I answer: When Manasseh and Ephraim wished to seize the land of the heathen, the men alone advanced; the women and children stayed behind in safety (Joshua i. 14). We should do the same. Men of wisdom and judgment, steadfast in the faith, should go forward and disarm these pagan writers; the young should not be exposed to danger. What if our youths were killed or wounded or taken prisoner? How many, alas, has pagan philosophy already drawn away from Christ and given over to Atheism! The safest plan, therefore, is to send armed men to deprive those accursed by heaven of their gold, silver, and precious things, and to distribute them among the heirs of God. O that God would stir up some heroic spirit to cull those flowers of elegance from the vast deserts in which they grow, and plant them in the garden of Christian philosophy, that nothing be lacking there.

22. Finally, if any pagan writers are to be countenanced, let them be Seneca, Epictetus, Plato, and similar teachers of virtue and honesty; since in these comparatively little error and superstition are to be found. This was the opinion of the great Erasmus, who advised that the Christian youth be brought up on the Holy Scriptures, but added: "If they have anything to do with profane literature, let it be with those books that approximate most closely to the Scriptures" (*Compendium of Theology*). But even these books should not be given to the young until their Christian faith is well assured; and in any case careful editions should be issued in which the names of the gods and the general tone of superstition should be removed. For it is on the condition that their heads be shaved and their nails pared, that God allows heathen maidens to be taken to wife (Deut. xxi. 12). Let there be no misunderstanding. We do not absolutely prohibit Christians from reading heathen writings, since to those who believe Christ has given the power of taking up serpents, and drinking deadly things with impunity (Mark xvi. 18); but the sons

of God, whose faith is yet weak, should not be exposed to these serpents, and to give them the opportunity of drinking such poison would indeed be rash. Great caution should therefore be used, and this is what we urge. The Spirit of Christ has said that the children of God should be nourished by the spiritual milk that is without guile (1 Peter ii. 2 ; 2 Tim. iii. 15).

23. But those who thus incautiously aid the cause of Satan and oppose that of Christ have yet another argument. "The Holy Scriptures," they say, "are too hard for the young, and therefore some other books must be given them to read until their judgment is mature."

I answer: This is the language of those who err and know not the Scriptures nor the power of God, as I will show in three ways: firstly, there is a well-known story told of Timotheus the celebrated musician, that whenever he took a fresh pupil he asked him if he had already learned the rudiments with another master. If he answered in the negative he took him at a moderate price; if in the affirmative he charged twice as much. For he said that those who had already learned give him twice as much trouble, as he had first to cure them of their bad habits, and then to teach them the right way to play. Now, our master, and that of the human race, is Jesus Christ, and we are forbidden to go to any other (Matt. xvii. 5, and xxiii. 8). He it was who said: "Suffer the little children to come unto me, and forbid them not" (Mark x. 14), and shall we, contrary to His will, lead them elsewhere? Are we afraid that Christ's task will be too light, and that He will teach them His ways too easily? And are we therefore to take them through the cook-shops and taverns, and give them to Christ to reform when thoroughly corrupt? This is a terrible proposal for the unhappy and innocent boys; for either they will have to spend their whole lives in laboriously getting rid of the habits they have acquired, or they will be altogether rejected by Christ, and given over to the tuition of Satan. Is not that which has been consecrated to Moloch an abomination to God? Let the

Christian magistrates and the heads of the Churches—by God's mercy I implore it—take steps to prevent Christian boys, born in Christ and consecrated through baptism, from being offered up to Moloch.

24. The cry that the Scriptures are too difficult to be understood by children, is altogether false. Does God not know how to suit His Word to our understanding? (Deut. xxxi. 11, 12, 13). Does not David say that the law of the Lord gives wisdom to little ones (N.B. *to little ones*)? Does not Peter say that the Word of God is milk for the newborn babes of God, given to them that they may grow thereby unto salvation (1 Peter ii. 2)? The Word of God, therefore, is the sweetest and best milk for the newborn children of God. Why oppose God on this point? Especially since pagan learning needs teeth to masticate it; yes, and often breaks them. Therefore the Holy Spirit, through David, invites the little ones into His school: "Come, ye children, hearken unto me; I will teach you the fear of the Lord" (Psalm xxxiv. 11).

25. Lastly, that the Scriptures contain passages of great profundity is perfectly true; but they are of such a kind that, while elephants sink to the bottom, lambs can swim with ease in them, to quote the words of St. Augustine when he wished to lay stress on the difference between the wise of the world who rush into Scriptural criticism presumptuously and Christ's little ones who approach God's Word in a humble and meek spirit. Besides, what need is there to begin with difficult passages? We can proceed step by step. First, we should embark upon the Catechism, and then keep in shallow water by teaching Scripture history, moral sentences, and the like, that can be easily understood, but which at the same time lead to the weightier matters that follow. And finally, when our pupils are fit for it, we can introduce them to the mysteries of the Faith. Thus, knowing the sacred writings from their infancy, they will be the more easily preserved from worldly corruption, and will be made wise unto salvation through faith which is in Christ Jesus (2 Tim. iii. 15). For, if a

man give himself up to God, sit at the feet of Christ, and listen to the wisdom that comes from on high, it is impossible that the Spirit of Grace should not fill him, kindle within him the light of true reason, and point out the true path of salvation.

26. I pass over the fact that those authors who are placed before Christian boys instead of the Bible (Terence, Cicero, Virgil, etc.), possess the very defects that are attributed to the Scriptures, since they are difficult and not suited to the young. It was not for boys that they wrote, but for men of mature judgment, accustomed to the theatre and the law-courts, and it therefore goes without saying that they can be of no advantage to any one else. One thing at any rate is certain, that he who has reached man's estate will derive more profit from reading Cicero once than if he had learned his entire works off by heart when a boy, and that such studies should therefore be deferred to a suitable season, and then only approached by those to whom they will be of use, if indeed they are of use to any one.

Of far greater importance is the point that has already been mentioned, namely, that the task of Christian schools is to form citizens, not for the world, but for heaven, and that they should accordingly be supplied with masters who are better acquainted with heavenly than with earthly things.

27. Let us conclude, therefore, with the angelic words: "In the place wherein the highest beginneth to show his city, there can no man's building be able to stand" (2 Esdras x. 54). As God wishes us to be trees of righteousness, the planting of the Lord, that He may be glorified (Isaiah lxi. 3), we should not allow our children to be shrubs in the plantation of Aristotle, or of Plato, or of Plautus, or of Cicero, or of any author whose works they may chance to read: "Every plant, which my heavenly Father planted not, shall be rooted up" (Matt. xv. 13); "Tremble therefore, ye who cease not to murmur, and to exalt yourselves against the knowledge of God" (2 Cor. x. 5).

CHAPTER XXVI

OF SCHOOL DISCIPLINE

1. THERE is a proverb in Bohemia, "A school without discipline is like a mill without water," and this is very true. For, if you withdraw the water from a mill, it stops, and, in the same way, if you deprive a school of discipline, you take away from it its motive power. A field also, if it be never ploughed, produces nothing but weeds; and trees, if not continually pruned, revert to their wild state and bear no fruit. It must not be thought, however, that we wish our schools to resound with shrieks and with blows. What we demand is vigilance and attention on the part of the master and of the pupils. For discipline is nothing but an unfailing method by which we may make our scholars, scholars in reality.

2. As regards discipline, therefore, it is advisable that the educator of youth know its object, its subject-matter, and the various forms which it may assume, since he will then know why, when, and how, systematised severity is to be used.

3. We may start with the incontestable proposition that punishment should be employed towards those who err. But it is not because they have erred that they should be punished (for what has been done cannot be undone), but in order that they may not err again in the future. Discipline should therefore be free from personal elements, such as anger or dislike, and should be exercised with such frankness and sincerity of purpose, that even the pupils

may feel that the action taken is for their good, and that those set over them are but exercising paternal authority. They will thus regard it in the same light as a bitter draught prescribed for them by the doctor.

4. Now no discipline of a severe kind should be exercised in connection with studies or literary exercises, but only where questions of morality are at stake. For, as we have already shown, studies, if they are properly organised, form in themselves a sufficient attraction, and entice all (with the exception of monstrosities) by their inherent pleasantness. If this be not the case, the fault lies, not with the pupil, but with the master, and, if our skill is unable to make an impression on the understanding, our blows will have no effect. Indeed, by any application of force we are far more likely to produce a distaste for letters than a love for them. Whenever, therefore, we see that a mind is diseased and dislikes study, we should try to remove its indisposition by gentle remedies, but should on no account employ violent ones. The very sun in the heavens gives us a lesson on this point. In early spring, when plants are young and tender, he does not scorch them, but warms and invigorates them by slow degrees, not putting forth his full heat until they are full-grown and bring forth fruit and seeds. The gardener proceeds on the same principle, and does not apply the pruning-knife to plants that are immature. In the same way a musician does not strike his lyre a blow with his fist or with a stick, nor does he throw it against the wall, because it produces a discordant sound; but, setting to work on scientific principles, he tunes it and gets it into order. Just such a skilful and sympathetic treatment is necessary to instil a love of learning into the minds of our pupils, and any other procedure will only convert their idleness into antipathy and their lack of interest into downright stupidity.

5. If, however, some stimulus be found necessary, better means than blows can be found. Sometimes a few severe words or a reprimand before the whole class is very efficacious, while sometimes a little praise bestowed on the others

has great effect. "See how well so-and-so attends! See how quickly he sees each point! While you sit there like a stone!" It is often of use to laugh at the backward ones. "You silly fellow, can't you understand such a simple matter?" Weekly, or at any rate monthly, contests for the first place in class may also be introduced, as we have shown elsewhere. Great care, however, should be taken that these experiments do not degenerate into a mere amusement, and thus lose their force; since, if they are to act as a stimulus to industry, they must be backed on the part of the pupil by a love of praise and a dislike of blame or of losing his place in class. It is therefore absolutely essential that the master be always in the room, that he throw a good deal of energy into his work, and that he scold the idlers and praise the hard-working boys before the whole class.

6. Only in the case of moral delinquencies may a severer discipline be used: (1) as, for instance, in the case of impiety of any kind, such as blasphemy, obscenity, or any other open offence against God's law. (2) In the case of stubbornness and premeditated misbehaviour, such as disobeying the master's orders, or the conscious neglect of duty. (3) In the case of pride and disdain, or even of envy and idleness; as, for example, if a boy refuse to give a schoolfellow assistance when asked to do so.

7. For offences of the first kind are an insult to God's majesty. Those of the second kind undermine the foundation of all virtue, namely, humility and obedience. While those of the third kind prevent any rapid progress in studies. An offence against God is a crime, and should be expiated by an extremely severe punishment. An offence against man is iniquitous, and such a tendency should be promptly and sternly corrected. But an offence against Priscian is a stain that may be wiped out by the sponge of blame. In a word, the object of discipline should be to stir us up to revere God, to assist our neighbours, and to perform the labours and duties of life with alacrity.

8. The sun in the heavens teaches us the best form of

discipline, since to all things that grow it ministers (1) light and heat, continuously; (2) rain and wind, frequently; (3) lightning and thunder, but seldom; although these latter are not wholly without their use.

9. It is by imitating this that the master should try to keep his pupils up to their work.

(1) He should give them frequent examples of the conduct that they should try to imitate, and should point to himself as a living example. Unless he does this, all his work will be in vain.

(2) He may employ advice, exhortation, and sometimes blame, but should take great care to make his motive clear and to show unmistakably that his actions are based on paternal affection, and are destined to build up the characters of his pupils and not to crush them. Unless the pupil understands this and is fully persuaded of it, he will despise all discipline and will deliberately resist it.

(3) Finally, if some characters are unaffected by gentle methods, recourse must be had to more violent ones, and every means should be tried before any pupil is pronounced impossible to teach. Without doubt there are many to whom the proverb, "Beating is the only thing that improves a Phrygian," applies with great force. And it is certain that, even if such measures do not produce any great effect on the boy who is punished, they act as a great stimulus to the others by inspiring them with fear. We should take great care, however, not to use these extreme measures too readily, or too zealously, as, if we do, we may exhaust all our resources before the extreme case of insubordination which they were intended to meet, arises.

10. In short, the object of discipline should be to confirm those who are being trained up for God and for the Church, in that disposition which God demands in His sons, the pupils in the school of Christ, so that they may rejoice with trembling (Psalm ii. 11), and looking to their own salvation may rejoice always in the Lord (Phil. ii. 4 and 10), that is to say, that they may love and reverence their

masters, and not merely allow themselves to be led in the right direction, but actually tend towards it of their own accord.

This training of the character can only be accomplished in the above-mentioned ways: by good example, by gentle words, and by continually taking a sincere and undisguised interest in the pupil. Sudden bursts of anger should only be used in exceptional circumstances, and then with the intention that renewed good feeling shall be the result.

11. For (to give one more example) did any one ever see a goldsmith produce a work of art by the use of the hammer alone? Never. It is easier to cast such things than to beat them out, and, if any excrescence have to be removed, it is not by violent blows that the artificer gets rid of it, but by a series of gentle taps, or by means of a file or a pair of forceps; while he completes the operation by polishing and smoothing his work. And do we believe that irrational force will enable us to produce intelligent beings, images of the living God?

12. A fisherman, too, who catches fish in deep waters with a drag-net, not only fastens on pieces of lead to sink it, but also attaches corks to the other end of it, that it may rise to the surface of the water. In the same way whoever wishes to ensnare the young in the nets of virtue, must, on the one hand, humble and abase them by severity, and, on the other, exalt them by gentleness and affection. Happy are the masters who can combine these two extremes! Happy are the boys who find such masters!

13. Here we may quote the opinion which that great man, Eilhard Lubinus, doctor of theology, has expressed on the reform of schools in the preface to his edition of the New Testament in Greek, Latin, and German—

“The second point is this: the young should never be compelled to do anything, but their tasks should be of such a kind and should be set them in such a way that they will do them of their own accord, and take pleasure in them. I am therefore of opinion that rods and blows,

those weapons of slavery, are quite unsuitable to freemen, and should never be used in schools, but should be reserved for boys of an abnormal and servile disposition. Such boys are easily recognised and must be removed from the school at once, on account both of the sluggishness of their disposition and of the depravity that is generally found in conjunction with it. Besides, any knowledge that they may acquire will be employed for wicked purposes, and will be like a sword in the hands of a madman. There are, however, other kinds of punishment suitable for boys who are free-born and of normal disposition, and these we may employ."

CHAPTER XXVII

OF THE FOURFOLD DIVISION OF SCHOOLS, BASED ON AGE AND ACQUIREMENTS

1. ARTISANS are accustomed to fix certain limits of time for the training of an apprentice (two, three, or seven years), according to the ease or difficulty of the trade. Within these limits a complete training can be had, and those apprentices who have completed the course become, first, journeymen, and then master-workmen. The same system must be adopted in school organisation, and distinct periods of time must be mapped out for the acquirement of arts, sciences, and languages respectively. In this way we may cover the whole range of human knowledge within a certain number of years, and may possess true learning, true morality, and true piety by the time we leave the forging-places of humanity.

2. In order that this goal may be reached, the whole period of youth must be devoted to the cultivation of the intellect (and by this we do not mean that one art only, but that all the liberal arts and all the sciences should be acquired). The process should begin in infancy and should continue until the age of manhood is reached ; and this space of twenty-four years should be divided into well-defined periods. In this we must follow the lead of nature. For experience shows that a man's body continues to grow up to his twenty-fifth year, and that after this it only increases in strength ; and we must conclude that this slow rate of increase has been accorded to man

by the forethought of God (for the larger bodies of animals attain their full growth in a few months, or in a couple of years at most) that he may have the more time to prepare himself for the duties of life.

3. The whole period, therefore, must be divided into four distinct grades: infancy, childhood, boyhood, and youth, and to each grade six years and a special school should be assigned.

I. For infancy	$\left\{ \begin{array}{l} \text{the} \\ \text{school} \\ \text{should} \\ \text{be} \end{array} \right\}$	The mother's knee.
II. For childhood		The Vernacular-School.
III. For boyhood		The Latin-School or Gymnasium.
IV. For youth		The University and travel.

A Mother-School should exist in every house, a Vernacular School in every hamlet and village, a Gymnasium in every city, and a University in every kingdom or in every province.

4. These different schools are not to deal with different subjects, but should treat the same subjects in different ways, giving instruction in all that can produce true men, true Christians, and true scholars; throughout graduating the instruction to the age of the pupil and the knowledge that he already possesses. For, according to the laws of this natural method, the various branches of study should not be separated, but should be taught simultaneously, just as the various parts of a tree increase together at every period of its growth.

5. The difference between these schools is threefold. Firstly, in the earlier schools everything is taught in a general and undefined manner, while in those that follow the information is particularised and exact; just as a tree puts forth more branches and shoots each successive year, and grows stronger and more fruitful.

6. Secondly, in the Mother-School the external senses should be exercised and taught to distinguish the objects that surround them. In the Vernacular-School, the internal senses, the imagination and the memory, in combination with their cognate organs, should be trained, and this

by reading, writing, painting, singing, counting, measuring, weighing, and committing various things to memory. In the Latin-School the pupil should be trained to understand and pass judgment on the information collected by the senses, and this by means of dialectic, grammar, rhetoric, and the other sciences and arts that are based on principles of causation. Finally, to the University belong those subjects that have special relation to the will, namely, the faculties, of which theology teaches us to restore harmony to the soul ; philosophy, to the mind ; medicine, to the vital functions of the body ; and jurisprudence, to our external affairs.

7. Our faculties are best developed in the following manner. The objects should first be placed before the organs of sense on which they act. Then the internal senses should acquire the habit of expressing in their turn the images that result from the external sensation, both internally by means of the faculty of recollection, and externally with the hand and tongue. At this stage the mind can begin to operate, and, by the processes of exact thought, can compare and estimate all objects of knowledge. In this way an acquaintance with nature and a sound judgment may be obtained. Last of all, the will (which is the guiding principle in man) makes its power felt in all directions. To attempt to cultivate the will before the intellect (or the intellect before the imagination, or the imagination before the faculty of sense perception) is mere waste of time. But this is what those do who teach boys logic, poetry, rhetoric, and ethics before they are thoroughly acquainted with the objects that surround them. It would be equally sensible to teach boys of two years old to dance, though they can scarcely walk. Let our maxim be to follow the lead of nature in all things, to observe how the faculties develop one after the other, and to base our method on this principle of succession.

8. A third difference between the schools is this. The Mother-School and the Vernacular-School embrace all the young of both sexes. The Latin-School gives a more

thorough education to those who aspire higher than the workshop ; while the University trains up the teachers and learned men of the future, that our churches, schools, and states may never lack suitable leaders.

9. These four classes of schools may be compared to the four seasons of the year. The Mother-School recalls the gentle spring, filled with the varied scent of flowers. The Vernacular-School represents the summer that spreads before our eyes its full ears and early fruit. The Latin-School corresponds to autumn, for here the fruit in the fields and vineyards is collected and stored away in the granaries of our mind. And last of all, the University may be compared to the winter, when we prepare for various uses the fruit already collected, that we may have sufficient to sustain us for the rest of our lives.

10. Our method of education may also be compared to the various stages in the growth of a tree. The boys who are six years of age and are tenderly cared for by their parents are like shoots that have been carefully planted, have taken root, and are beginning to put forth buds. At twelve years of age they are like a young tree that is covered with branches and buds, though it is as yet uncertain how these will develope. At eighteen years of age, youths well instructed in languages and arts are like trees covered with blossoms that are pleasant to see and to smell, and at the same time give promise of fruit. And finally, at twenty-four or twenty-five years of age, young men, who have been thoroughly educated at a university, resemble a tree covered with fruit that can be plucked and used when it is required.

But we must now examine the several stages in detail.

CHAPTER XXVIII

SKETCH OF THE MOTHER-SCHOOL

1. It is when it first comes into being that a tree puts forth the shoots that are later on to be its principal branches, and it is in this first school that we must plant in a man the seeds of all the knowledge with which we wish him to be equipped in his journey through life. A brief survey of the whole of knowledge will show the possibility of this, and this survey can easily be made if we bring everything under twenty headings.

2. (i.) Metaphysic (as it is called) should certainly be our starting-point, since the first conceptions that children have are general and confused. They see, hear, taste, and touch, but are ignorant of the exact object of their sensations. They commence, therefore, by learning the general concepts: something, nothing, it is, it is not, thus, otherwise, where, when, like, unlike, etc., and these are nothing but the prime concepts of metaphysic.

3. (ii.) In physics, a boy, during the first six years of his life, can be brought to know what are water, earth, air, fire, rain, snow, frost, stone, iron, trees, grass, birds, fishes, oxen, etc. He may also learn the names and uses of the members of his body, or at any rate of the external ones. At this age these things are easily learned, and pave the way for natural science.

4. (iii.) A boy learns the elements of optics when he begins to distinguish and to call by their names light, darkness, and shade, and to know the difference between the principal colours, white, black, red, etc.

5. (iv.) The rudiments of astronomy will consist in knowing what is meant by the heavens, the sun, the moon, and the stars, and in watching their rising and their setting daily.

6. (v.) We know the elements of geography when we learn the nature of mountains, valleys, plains, rivers, villages, citadels, or states, according to the situation of the place in which we are brought up.

7. (vi.) The basis of chronology is laid, if the boy understand what is meant by an hour, a day, a week, or a year ; or what summer and winter are ; or the signification of the terms "yesterday," "the day before yesterday," "to-morrow," "the day after to-morrow," etc.

8. (vii.) The commencement of history consists in re-collecting and reporting what has recently happened, or how this or that person has carried out this or that matter ; though this exercise should only relate to some incident in the child's life.

9. (viii.) The seeds of arithmetic will be planted if the child understand what is meant by "much" and "little," can count up to ten, can see that three are more than two, and that one added to three makes four.

10. (ix.) He will possess the elements of geometry if he know what we mean by "large" and "small," "long" and "short," "broad" and "narrow," "thick" and "thin" ; what we signify by a line, a cross, or a circle, and how we measure objects in feet and yards.

11. (x.) The elements of statics will have been learned if the children see objects weighed in scales, or acquire the power of telling the approximate weight of objects by weighing them in their hands.

12. (xi.) They will receive a training in mechanics if they are permitted or are actually taught to employ their hands continually ; for instance, to move something from one place to another, to arrange something else in one way or another, to construct something, or to pull something to pieces, to make knots or to undo them, and so forth ; the very things that children of this age love to do. As these

actions are nothing but the efforts of an active mind to realise itself in mechanical production, they should not be hindered, but rather encouraged and skilfully guided.

13. (xii.) The elements of the process of reasoning, namely dialectic, are learned when the child observes that conversations are carried on by means of question and answer, and himself acquires the habit of asking and answering questions. He should, however, be taught to ask sensible questions and to give direct answers, and also not to wander from the point at issue.

14. (xiii.) The grammar of childhood consists in learning to speak the mother-tongue correctly, that is to say, in pronouncing with distinctness the letters, syllables, and words.

15. (xiv.) The beginnings of rhetoric consist in imitating the figures of speech that occur in family conversation, but more especially in the appropriate use of gesture, and in inflecting the voice so as to suit the words; that is to say, the voice should be raised on the last syllables of words, in asking questions, and lowered in answering them. This and similar points are acquired naturally, but a little instruction is of great assistance if any mistakes are made.

16. (xv.) Children may get some notion of poetry by learning a number of verses off by heart, for preference those that contain some moral sentiment.

17. (xvi.) They will take their first steps in music by learning easy hymns and psalms. This exercise should form part of their daily devotions.

18. (xvii.) The rudiments of economics are acquired when the child learns the names of the various members of a family, that is to say, what is meant by the terms father, mother, maid-servant, man-servant, etc.; or the various parts of a house, as hall, kitchen, bedroom, stable; or the names of domestic utensils, as table, plate, knife, broom, etc.

19. (xviii.) It is not so easy to give a foretaste of politics, as at this age the understanding is only sufficiently

developed to take in household affairs. Some attempt, however, may be made. It may be pointed out, for instance, that, in a state, some men meet together in a council-chamber and are called councillors, and that of these some are called members, others ministers, others lawyers, and so forth.

✓ 20. (xix.) But it is of morals (ethics), in particular, that the foundations should be solidly laid, for to a well-educated youth we wish the practice of virtue to be second nature. For instance,

(1) Temperance should be practised by never overfilling the stomach, and by never taking more food than is necessary to appease hunger and thirst.

(2) Cleanliness should be practised at meals, and in the treatment of clothes, dolls, and toys.

(3) Reverence should be shown by the child to his superiors.

(4) Obedience to both commands and prohibitions should always be willing and prompt.

(5) Truth should always be religiously observed. Falsehood and deceit should never be permitted, whether in jest or in earnest (for jests of this kind may degenerate into a serious evil).

(6) They will learn justice if they never touch, take, keep, or hide anything that belongs to any one else, if they annoy no one, and envy no one.

(7) It is of greater importance that they learn to practise charity, so that they may be ready to give alms to those whom need compels to ask for them. For love is the especial virtue of Christians. Christ bids us practise it; and, now that the world is growing aged and cold, it is greatly to the interest of the Church to kindle in men's hearts the flame of love.

(8) Children should also be taught to occupy themselves continually, either with work or with play, so that idleness may become intolerable to them.

(9) They should be taught to speak but little and to refrain from saying all that rises to their lips, nay, even to

maintain absolute silence when the occasion demands it; that is to say, when others are speaking, when any distinguished person is present, and when the circumstances demand silence.

(10) It is also important that they learn patience in infancy, since this will be of use to them throughout their whole lives. In this way the passions may be subdued before they acquire strength, while reason, and not impulse, will gain the upper hand.

(11) Politeness and readiness to help others is a great ornament of youth, and, indeed, of every age. This also should be learned in the first six years, that our youths may lose no opportunity of rendering services to those whom they meet.

(12) Nor must we omit to train them in good manners, that they may do nothing stupidly or boorishly. To this end they should learn the manners of polite society; such as how to shake hands, how to make a modest request when they want anything, and how to bend the knee and kiss the hand gracefully when returning thanks for a kindness.

21. (xx.) Finally, by the time they are six years old, boys should have made considerable progress in religion and piety; that is to say, they should have learned the heads of the Catechism and the principles of Christianity, and should understand these and live up to them as far as their age permits. Thus, by realising that the Deity is ever present, by seeing God around them, and by fearing Him as the just avenger of the wicked, they will be prevented from committing any sinful act; while by loving, reverencing, and praising in Him the just recompenser of the righteous, and by seeking for His compassion in life and in death, they will be led to omit no righteous act that they think may please Him, will acquire the habit of living as if they were in God's presence, and (as the Scripture saith) will walk with God.

22. We shall thus be able to apply to Christian children the words that the Evangelist uses of Christ Himself:

"He advanced in wisdom and stature, and in favour with God and men" (Luke ii. 52).

23. We have now described the limits and the tasks of the Mother-School.³⁸ It is impossible to give a more detailed account, or a time-table stating how much work should be done in each year, month, and day (as is both possible and desirable in the Vernacular-School and in the Latin-School), for two reasons: firstly, because it is not possible for parents, who have their household duties to occupy them, to proceed as methodically as a schoolmaster can, whose sole occupation is to instruct youth; secondly, because, in respect of intellect and teachableness, some children develop much sooner than others. Some children of two years old can speak with ease, and display great intelligence, while others are scarcely equal to them when five years old. With this early education, therefore, all detail must be left to the prudence of the parent.

24. Assistance, however, may be given in two ways. In the first place, a hand-book should be written for parents and nurses, that they may have their duties in black and white before their eyes. This hand-book should contain a brief description of the various subjects in which the children should be educated, and should state the occasions that are most suitable for each, and with what words and what gestures it is best to instil them. Such a book with the title, "Informatory of the Mother-School," has still to be written by me.

25. The other aid to study in the Mother-School is a picture-book which should be put straight into the child's hands. At this age instruction should mainly be carried on through the medium of sense-perception, and, as sight is the chiefest of the senses, our object will be attained if we give the children pictures of the most important objects in physics, optics, astronomy, geometry, etc., and these may be arranged in the order of the subjects of knowledge that we have just sketched. In this book should be depicted mountains, valleys, trees, birds, fishes, horses, oxen, sheep, and men of varied age and height. Light and darkness

also should be represented, as well as the heavens with the sun, moon, stars, and clouds, while to these the principal colours should be added. Articles connected with the house and the workshop, such as pots, plates, hammers, pincers, etc., should not be omitted. State functionaries should be represented; the king with his sceptre and crown, the soldier with his arms, the husbandman with his plough, the waggoner with his waggon, and the post-cart going at full speed; while over each picture should be written the name of the object that it represents, as "house," "ox," "dog," "tree," etc.

26. This picture-book will be of use in three ways: (1) It will assist objects to make an impression on the mind, as we have already pointed out. (2) It will accustom the little ones to the idea that pleasure is to be derived from books. (3) It will aid them in learning to read. For, since the name of each object is written above the picture that represents it, the first steps in reading may thus be made.

CHAPTER XXIX

SKETCH OF THE VERNACULAR-SCHOOL

1. In chap. ix. I demonstrated that all the young of both sexes should be sent to the public schools, I now add that they should first be sent to the Vernacular-School. Some writers hold the contrary opinion. Zepper³⁹ (*Pol.* bk. i. ch. 7) and Alsted⁴⁰ (*Scholastic*, ch. 6) would persuade us that only those boys and girls who are destined for manual labour should be sent to the Vernacular-School, while boys whose parents wish them to receive a higher education should be sent straight to the Latin-School. Moreover, Alsted adds: "Some will doubtless disagree with me, but the system that I propose is the one which I would wish adopted by those whose educational interests I have most at heart." From this view my whole didactic system forces me to dissent.

2. (i.) The education that I propose includes all that is proper for a man, and is one in which all men who are born into this world should share. All therefore, as far as is possible, should be educated together, that they may stimulate and urge on one another.

(ii.) We wish all men to be trained in all the virtues, especially in modesty, sociability, and politeness, and it is therefore undesirable to create class distinctions at such an early age, or to give some children the opportunity of considering their own lot with satisfaction and that of others with scorn.

(iii.) When boys are only six years old, it is too early to

determine their vocation in life, or whether they are more suited for learning or for manual labour. At this age, neither the mind nor the inclinations are sufficiently developed, while, later on, it will be easy to form a sound opinion on both. In the same way, while plants are quite small, a gardener cannot tell which to hoe up and which to leave, but has to wait until they are more advanced. Nor should admission to the Latin-School be reserved for the sons of rich men, nobles, and magistrates, as if these were the only boys who would ever be able to fill similar positions. The wind blows where it will, and does not always begin to blow at a fixed time.

3. (iv.) The next reason is that my universal method has not as its sole object the Latin language, that nymph on whom such unbounded admiration is generally wasted, but seeks a way by which each modern language may be taught as well (that every spirit may praise the Lord more and more). This design should not be frustrated by the complete and arbitrary omission of the Vernacular-School.

4. (v.) To attempt to teach a foreign language before the mother-tongue has been learned is as irrational as to teach a boy to ride before he can walk. To proceed step by step is of great importance, as we have seen in chap. xvi. Principle 4. Cicero declared that he could not teach elocution to those who were unable to speak, and, in the same way, my method confesses its inability to teach Latin to those who are ignorant of their mother-tongue, since the one paves the way for the other.

5. (vi.) Finally, what I have in view is an education in the objects that surround us, and a brief survey of this education can be best obtained from books written in the mother-tongue, which embody a list of the things that exist in the external world. This preliminary survey will render the acquisition of Latin far easier, for it will only be necessary to adapt a new nomenclature to objects that are already known; while to the knowledge of actual facts may be added by degrees that of the causes which underlie those facts.

6. Proceeding, therefore, on the basis of my fourfold

division of schools, we may define the Vernacular-School as follows. The aim and object of the Vernacular-School should be to teach to all the young, between the ages of six and twelve, such things as will be of use to them throughout their whole lives. That is to say:

(i.) To read with ease both print and writing in their mother-tongue.

(ii.) To write, first with accuracy, then with speed, and finally with confidence, in accordance with the grammatical rules of the mother-tongue. These rules should be written in a popular form, and the boys should be exercised in them.

(iii.) To count, with ciphers and with counters, as far as is necessary for practical purposes.

(iv.) To measure spaces, such as length, breadth, and distance, with skill.

(v.) To sing well-known melodies, and, in the case of those who display especial aptitude, to learn the elements of advanced music.

(vi.) To learn by heart the greater number of the psalms and hymns that are used in the country. For, if brought up in the praise of God, they will be able (as the Apostle says) to exhort one another with psalms and hymns and spiritual songs, singing to God from their hearts.

(vii.) Besides the Catechism they should know the most important stories and verses in the Bible, and should be able to repeat them word for word.

(viii.) They should learn the principles of morality, which should be drawn up in the shape of rules and accompanied by illustrations suitable to the age and understanding of the pupils. They should also begin to put these principles into practice.

(ix.) They should learn as much economics and politics as is necessary to enable them to understand what they see daily at home and in the state.

(x.) They should also learn the general history of the world; its creation, its fall, its redemption, and its preservation by God up to the present day.

(xi.) In addition, they should learn the most important facts of cosmography, such as the spherical shape of the heavens, the globular shape of the earth suspended in their midst, the tides of the ocean, the shapes of seas, the courses of rivers, the principal divisions of the earth, and the chief kingdoms of Europe ; but, in particular, the cities, mountains, rivers, and other remarkable features of their own country.

(xii.) Finally, they should learn the most important principles of the mechanical arts, both that they may not be too ignorant of what goes on in the world around them, and that any special inclination towards things of this kind may assert itself with greater ease later on.

7. If all these subjects have been skilfully handled in the Vernacular-School, the result will be that those youths who begin the study of Latin or who enter on agriculture, trade, or professional life will encounter nothing which is absolutely new to them ; while the details of their trades, the words that they hear in church, and the information that they acquire from books, will be to them nothing but the more detailed exposition or the more particular application of facts with which they are already acquainted. They will thus find themselves all the fitter to use their understanding, their powers of action, and their judgment.

8. To attain this result we employ the following means :—

(i.) All the children in the Vernacular-School, who are destined to spend six years there, should be divided into six classes, each of which, if possible, should have a class-room to itself, that it may not hinder the others.

(ii.) Specially prepared books should be supplied to each class, and these should contain the whole subject-matter of the literary, moral, and religious instruction prescribed for the class. Within these limits no other books should be needed, and, by their aid, the desired result should infallibly be obtained. They should embody a complete grammar of the mother-tongue, in which should be comprised the names of all the objects that children of

this age can understand, as well as a selection of the most common phrases in use.

9. These class-books should be six in number, corresponding to the number of the classes, and should differ, not in their subject-matter, but in their way of presenting it. Each should embrace all the above-mentioned subjects; but the earlier ones should treat of them in a general manner, choosing their better known and easier features; while those which come later should draw attention to the less known and more complex details, or should point out some fresh way of treating the subject, and thus excite interest and attention. The truth of this will soon be evident.

10. Care must be taken to suit all these books to the children for whom they are intended; for children like whimsicality and humour, and detest pedantry and severity. Instruction, therefore, should ever be combined with amusement, that they may take pleasure in learning serious things which will be of genuine use to them later on, and that their dispositions may be, as it were, perpetually enticed to develop in the manner desired.

11. The titles of these books should be of such a kind as to please and attract the young, and should at the same time express the nature of their contents. Suitable names might be borrowed from the nomenclature of a garden, that sweetest possession of youth. Thus, if the whole school be compared to a garden, the book of the lowest class might be called the violet-bed, that of the second class the rose-bed, that of the third the grass-plot, and so on.

12. Of the matter and form of these books I will speak in greater detail elsewhere. I will only add that, as they are written in the mother-tongue, the technical terms of the arts should also be expressed in the vernacular, and not in Latin or Greek. For (1) we wish the young to make progress with as little delay as possible. Now foreign terms must necessarily be explained before they are understood, and, even when explained, are not properly understood, but are thought to have no meaning apart from

their technical signification. In addition, they are difficult to remember. On the other hand, if the vernacular terms are used, it is only necessary to point out the object designated by each term. In this way we wish to remove all delays and difficulties from the path of this elementary instruction. (2) Besides this, we wish to cultivate and improve the vernacular languages, and this is to be done, not by imitating the French, who incorporate Greek and Latin words that the people cannot understand (for which practice Stevin blames them), but by expressing our meaning in terms which can be understood by everybody. Stevin⁴¹ gave the same advice to the Belgians (*Geog.* bk. i.), and carried it into effect in his work on mathematics.

13. But it may be objected that all languages are not rich enough to supply suitable equivalents for Greek and Latin terms; that even if this were done, the learned would not relinquish their use; and, lastly, that those boys who are going to learn Latin had better begin at this stage, and so avoid the necessity of learning fresh technical terms later on.

14. I reply: If any language be obscure, or insufficient to express necessary ideas, this is the fault, not of the language, but of those who use it. The Romans and Greeks had originally to form the words that are now in use, and these words seemed so obscure and so rude that their authors were uncertain if they could ever serve as a vehicle for thought. But now that they are universally accepted they prove sufficiently expressive. As an illustration of what I mean, take the terms "essence," "substance," "accident," "quality," "quantity," etc. No language, therefore, need lack words unless men lack industry.

15. As for the second objection; let the learned retain their own terms. We are now seeking a way by which the common people may be led to understand and take an interest in the liberal arts and sciences; and with this end in view we must not speak in a language that is foreign to them, and that is in itself artificial.

16. And lastly, those boys who have to learn Latin later on will find it no disadvantage to know the technical terms in their mother-tongue, nor will it prove any hindrance to them that they praised God in their own language before doing so in Latin.

17. The third requisite is an easy method of introducing these books to the young, and of this we will give a brief sketch in the following rules :

(i.) The class lessons should not exceed four daily, of which two should be before mid-day, and two after. The remaining hours of the day may profitably be spent in domestic work (especially among the poor), or in some form of recreation.

(ii.) The morning should be devoted to the exercise of the intellect and the memory, the afternoon to that of the hand and the voice.

(iii.) In the morning the master shall read over the lesson for the hour several times, while the whole class attends, and shall explain anything that needs explanation in simple language, and in such a way that it cannot but be understood. He shall then bid the boys read it in turn, and while one reads it in a clear voice the rest should attend and follow in their books. If this be continued for half an hour, or longer, the clever boys and at last even the stupid ones will try to repeat by heart what they have just read. For the tasks that are set must be short ; not too long for an hour's lesson, or too hard for the boys to understand.

(iv.) No fresh work should be done in the afternoon, but the lessons done in the morning should be repeated. The pupils should transcribe portions of their printed books, and should compete with one another to see who can best remember the morning's lesson, or who is most proficient in writing, in singing, or in counting.

18. Not without reason do we recommend that all the pupils copy their printed books as neatly as they can. (1) The manual exercise of copying will help to impress on their minds the matter copied. (2) If the

practice be made a daily one, it will teach them to write well, quickly, and accurately, and this will be of the greatest use in the further prosecution of their studies, and in conducting the affairs of life. (3) This will be the surest proof to parents that their children are not wasting their time at school, and will enable them to judge how much progress they are making.

19. We have no space to go into further particulars at present, and will only touch on one more point. If any boys are to learn foreign languages, they should learn them now, at about the age of ten, eleven, or twelve, that is to say, *between* the Vernacular-School and the Latin-School. The best way is to send them to the place where the language that they wish to learn is spoken, and in the new language to make them read, write, and learn the class-books of the Vernacular-School (the subject-matter of which is already familiar to them).

CHAPTER XXX

SKETCH OF THE LATIN-SCHOOL.

1. IN this school the pupils should learn four languages and acquire an encyclopædic knowledge of the arts. Those youths who have completed its whole curriculum should have had a training as :

(i.) Grammarians, who are well versed in Latin and in their mother-tongue, and have a sufficient acquaintance with Greek and Hebrew.

(ii.) Dialecticians, who are well skilled in making definitions, in drawing distinctions, in arguing a point, and in solving hard questions.

(iii.) Rhetoricians or orators, who can talk well on any given subject.

(iv.) Arithmeticians, and (v.) geometricians ; both on account of the use of these sciences in daily life, and because they sharpen the intellect more than anything else.

(vi.) Musicians, both practical and theoretical.

(vii.) Astronomers, who have, at any rate, mastered the rudiments, such as the knowledge of the heavenly bodies, and the calculation of their movements, since without this science it is impossible to understand not only physics but also geography and a great part of history.

2. The above are commonly known as the seven liberal arts, a knowledge of which is demanded from a doctor of philosophy. But our pupils must aim higher than this, and in addition must be :

(viii.) Physicists, who know the composition of the earth,

the force of the elements, the different species of animals, the powers of plants and of minerals, and the structure of the human body, and who, besides knowing these things, can apply them to the various uses of life. Under this head is thus comprised a part of medicine, of agriculture, and of other mechanical arts.

(ix.) Geographers, who are well acquainted with the external features of the earth, and know the seas, the islands that are in them, the rivers, and the various kingdoms.

(x.) Chronologers, who can fix periods of time, and trace the course of the centuries from the beginning of the world.

(xi.) Historians, who possess a fair knowledge of the history of the human race, of the chief empires, and of the Church, and who know the various customs and fortunes of races and of men.

(xii.) Moralists, who can draw fine distinctions between the various kinds of virtue and of vice, and who can follow the one and avoid the other. This knowledge they should possess both in its general form and in its special application to the life of the family, of the state, and of the Church.

(xiii.) Finally, we wish them to be theologians, who, besides understanding the principles of their faith, can also prove them from the Scriptures.

3. When this course is finished, the youths, even if they have not a perfect knowledge of all these subjects (indeed at their age perfection is impossible, since experience is necessary to complete the theoretical knowledge that they have acquired, and the sea of learning cannot be exhausted in six years), should, at any rate, have laid a solid foundation for any more advanced instruction that they may receive in the future.

4. For the curriculum of six years, six distinct classes will be necessary, the names of which, starting from the lowest, might be as follows :—

- (i.) The Grammar class.
- (ii.) The Natural Philosophy class.
- (iii.) The Mathematical class.
- (iv.) The Ethics class.

(v.) The Dialectic class.

(vi.) The Rhetoric class.

5. I presume that no one can raise any objection to my placing grammar first, since it is the key of all knowledge ; but to those who are always guided by custom it may seem strange that I have placed real studies before dialectic and ethics. No other arrangement, however, is possible. It has already been shown that the study of facts must precede that of their combinations, that matter logically precedes its form, that this is the only method by which sure and rapid progress can be made, and that we must therefore learn our facts by observation before we can either pass a sound judgment on them, or enunciate them in well-turned phrases. A man may have the whole apparatus of logic and of eloquence at his fingers' ends, but of what value can his investigation or his proof be, if he be ignorant of the objects with which he is dealing? It is as impossible to talk sensibly about matters with which we are not acquainted as it is for a virgin to bring forth a child. Things exist in themselves, and are quite independent of their relation to thought and to speech. But thought and speech have no meaning apart from things, and depend entirely upon them. Unless it refers to definite objects, speech is nothing but sound without sense, and it is therefore absolutely necessary to give our pupils a thorough preliminary training in real studies.

6. Though many have held the contrary opinion, it has been conclusively shown by learned writers that the study of natural philosophy should precede that of ethics.

Lipsius,⁴² in his *Physiology*, bk. i. chap. i., writes as follows :—

“I am distinctly in agreement with the distinguished authorities who hold that natural philosophy should come first. Its study is productive of great pleasure, stimulates and retains the attention, and forms a suitable introduction to ethics.”

7. It is open to argument whether the Mathematical class should or should not precede the Natural Philosophy

class. It was with the study of mathematics that the ancients commenced the investigation of nature, for which reason they gave them the name of "The Sciences"; while Plato forbade those who were ignorant of geometry to enter his Academy. Their reasons for holding this view are easy to understand, since the sciences that deal with number and quantity make a special appeal to the senses, and are therefore easy to grasp; besides, they make a powerful impression on the imagination, and thus prepare the mind for studies of a more abstract nature.

8. All this is very true, but we have some other considerations to take into account: (1) In the Vernacular-School we advised the education of the senses, and the development of the mind through their means, and as our pupils have by this time been through a course of arithmetic they can scarcely be considered quite ignorant of mathematics. (2) Our method advances step by step. Before proceeding to complex problems of magnitude, we should deal with bodies in the concrete, and thus prepare our minds to grasp more abstract notions. (3) The curriculum of the Mathematical class, as drawn up by us, embodies most of the arts, and these cannot be thoroughly mastered without some knowledge of natural philosophy. But indeed, if others suggest a different order, and justify their preference by theoretical or practical reasons, I have no wish to gainsay them. My own view is opposed to theirs, and I have given my reasons for it.

9. As soon as a fair knowledge of Latin has been acquired (by the aid of the *Vestibulum* and the *Janua*, which are to be used in the first class), the pupils should be instructed in the science of first principles, commonly called metaphysics (though in my opinion it should be called prophysics or hypophysics, that is to say, ante-natural or sub-natural). For this science embraces the primary and the most important principles of existence, dealing with the essential hypotheses on which all things depend, their attributes, and their logical differences; and includes the most general definitions, axioms, and laws of

nature. When these are known (and by my method the task is an easy one), it will be possible to learn particulars and details with little effort, since, in a way, they will already be familiar, and nothing will be necessary but the application of general principles to particular instances. Immediately after this grounding in first principles, which should not occupy more than three months (for they will be speedily learned, being principles of pure reason and easily grasped by the mind), we may proceed to deal with the visible universe, that the marvels of nature (already set forth in the prophetic) may be demonstrated more and more clearly by particular examples. This will be supplied by the Natural Philosophy class.

10. From the essential nature of things we proceed to the more exact investigation of their accidental properties, and this we call the Mathematical class.

11. The pupils must next investigate man himself, viewed as a free agent and as the lord of creation. They must learn to notice what things are in our power, what are not, and how everything must submit to the inflexible laws of the universe.

This they will learn in the fourth year, in the Ethics class. But this must not consist of an historical course or of a mere statement of facts, as in the Vernacular-School. The reasons which underlie each fact must be given, that the pupils may acquire the habit of concentrating their attention on cause and effect. All controversial matter, however, must be carefully excluded from these first four classes, since we wish this to be reserved for the fifth class that follows.

12. In the Dialectic class, after a brief training in the laws of reasoning, the pupils should go over the whole field of natural philosophy, mathematics, and ethics, and carefully investigate any weighty points that are usually discussed by learned men. This gives an opportunity for explaining the cause and the nature of the controversy, for distinguishing between the thesis and the antithesis, and for showing by what arguments, real or plausible,

either may be controverted. The mistakes of the opposite side should then be exposed, and the cause of error and the fallacy of the arguments employed should be clearly shown; while, if there be an element of truth on both sides, the conflicting arguments may be reconciled. The utility of this process will be great, as it will not only comprise the recapitulation of facts already known, and illustrate those that are less familiar, but will at the same time teach the art of reasoning, of investigating what is unknown, and explaining what is obscure, of simplifying ambiguity, limiting statements that are too general, defending the truth with the weapons of truth, unmasking falsehood, and setting in order facts that are confused.

13. Last of all comes the Rhetoric class. In this the pupils should be taught to make an easy and profitable use of all that they have hitherto learned, and here it will be seen that they have learned something and have not spent their time in vain. For, in accordance with the saying of Socrates, "Speak, that I may see your character," we must train them to speak well, now that we have taught them to think accurately.

14. Therefore, after a preliminary training in the shortest and simplest rules of oratory, they should proceed to put these into practice by imitating the best masters. They should, however, not confine themselves to the subjects that they have already studied, but should traverse the whole field of truth, of existence, of human life, and of divine wisdom; that if they know anything which is true, good, pleasant, or useful they may be able to express it in suitable language, or, if necessary, to hold a brief for it. For this purpose they will at this stage be supplied with a mental furniture that is by no means to be despised, namely, a varied acquaintance with the facts of nature, and a good stock of words, of phrases, and of historical knowledge.

15. But of this we can speak more fully elsewhere; that is to say, if it be necessary, since the details will work themselves out in practice. We will only touch on one

point further. An acquaintance with history is the most important element in a man's education, and is, as it were, the eye of his whole life. This subject, therefore, should be taught in each of the six classes, that our pupils may be ignorant of no event which has happened from ancient times to the present day ; but its study must be arranged in such a way that it lighten their work instead of increasing it, and serve as a relaxation after their severer labours.

16. Our idea is that each class should have its own hand-book, dealing with some special branch of history ; for example :

- In class
- i. An epitome of Biblical history.
 - ii. Natural history.
 - iii. The history of art and of inventions.
 - iv. The history of morals.
 - v. The history of customs, treating of the habits of different nations.
 - vi. The general history of the world and of the principal nations ; but especially of the boys' native land, dealing with the whole subject tersely and comprehensively.

17. As regards the special method to be employed, I will make only one remark. The four hours of daily class instruction should be arranged as follows : the two morning hours should be devoted (as soon as morning prayer has been held) to the science or the art that forms the special subject of the class. Of the afternoon hours the first should be given to history, and, in the second, the pupils should be made to exercise style, declamation, and the use of their hands, in accordance with the requirements of the class.

CHAPTER XXXI

OF THE UNIVERSITY

1. OUR method does not really concern itself with University studies, but there is no reason why we should not state our views and our wishes with regard to them. We have already expressed our opinion that the complete training in any of the sciences or faculties should be reserved for the University.

2. Our ideal scheme is as follows :

(i.) The curriculum should be really universal, and provision should be made for the study of every branch of human knowledge.

(ii.) The methods adopted should be easy and thorough, that all may receive a sound education.

(iii.) Positions of honour should be given only to those who have completed their University course with success, and have shown themselves fit to be entrusted with the management of affairs.

We will briefly give some details on each of these points.

3. If its curriculum is to be universal, the University must possess (1) learned and able professors of all the sciences, arts, faculties, and languages, who can thus impart information to all the students on any subject ; (2) a library of well-selected books for the common use of all.

4. The studies will progress with ease and success if, firstly, only select intellects, the flower of mankind, attempt them. The rest had better turn their attention to more suitable occupations, such as agriculture, mechanics, or trade

5. Secondly, if each student devote his undivided energies to that subject for which he is evidently suited by nature. For some men are more suited than others to be theologians, doctors, or lawyers, just as others have a natural aptitude for and excel in music, poetry, or oratory. This is a matter in which we are apt to make frequent mistakes, trying to carve statues out of every piece of wood, and disregarding the intention of nature. The result is that many enter on branches of study for which they have no vocation, produce no good results in them, and attain to greater success in their subsidiary pursuits than in those that they have chosen.

A public examination, therefore, should be held for the students who leave the Latin-School, and from its results the masters may decide which of them should be sent to the University, and which should enter on the other occupations of life. Those who are selected will pursue their studies, some choosing theology, some politics, and some medicine, in accordance with their natural inclination and with the needs of the Church and of the state.

6. Thirdly, those of quite exceptional talent should be urged to pursue all the branches of study, that there may always be some men whose knowledge is encyclopædic.

7. Care should be taken to admit to the University only those who are diligent and of good moral character. False students, who waste their patrimony and their time in ease and luxury, and thus set a bad example to others, should not be tolerated. Thus, if there is no disease, there can be no infection, and all will be intent upon their work.

8. We said that every class of author should be read in the University. Now this would be a laborious task, but its use is great, and it is therefore to be hoped that men of learning, philologists, philosophers, theologians, physicians, etc., will render the same service to students as has been rendered to those who study geography by geographers. For these latter make maps of the provinces, kingdoms, and divisions of the world, and thus present to

the eye huge tracts of sea and land on a small scale, so that they can be taken in at a glance. Painters, also, produce accurate and life-like representations of countries, cities, houses, and men, no matter of what size the originals may be. Why, therefore, should not Cicero, Livy, Plato, Aristotle, Plutarch, Tacitus, Gellius, Hippocrates, Galen, Celsus, Augustine, Jerome, etc., be treated in the same way and epitomised? By this we do not allude to the collections of extracts and flowers of rhetoric, that are often met with. These epitomes should contain the whole author, only somewhat reduced in bulk.

9. Epitomes of this kind will be of great use. In the first place it will be possible to obtain a general notion of an author when there is no time to read his works at length. Secondly, those who (following Seneca's advice) wish to confine themselves to the works of one writer (for different writers suit different dispositions), will be able to take a rapid survey of all and to make their choice in accordance with their tastes. Thirdly, those who are going to read the authors in their entirety will find that these epitomes enable them to read with greater profit, just as a traveller is able to take in the details of his journey with greater ease, if he have first studied them on a map. Finally, these abstracts will be of great use to those who wish to make a rapid revision of the authors that they have read, as it will help them to remember the chief points, and to master them thoroughly.

10. Summaries of this kind may be issued both separately (for the use of poor students and those who are not in the position to read the complete works) and bound up with the complete works, that those who wish to read them may get an idea of the subject-matter before they begin.

11. As regards academic exercises, I imagine that public debates, on the model of a Gellian society, should be of great assistance. Whenever a professor delivers lectures on any subject, works which treat of that subject, and these the best that exist, should be given to the students for their private reading. Then the morning

lecture of the professor should serve as the subject for an afternoon debate, in which the whole class may join. One student may ask a question about some point that he does not understand, and may point out that in the author which he has been studying he has found an opinion, backed by reasonable arguments and opposed to that of the professor. Any other student may then rise (some forms of order being observed), and may answer the question raised ; while others may then decide if the point has been properly argued. Finally the professor, as president, may terminate the discussion. In this way, the private reading of each student will be of use to the whole class, and the subject will be so impressed on their minds that they will make real progress in the theory and practice of the sciences.

12. This practice of dissertation may be the means of fulfilling my third wish, that public posts of honour be given to none but the worthy. This result will be obtained if the appointment to these posts depend not on the decision of one man, but on the unanimous opinion of all. Once a year, therefore, the University should be visited by commissioners appointed by the king or by the state, just as the Latin-School is examined by its masters. The industry of the professors and students can thus be tested, and the most diligent of the latter should receive a public recognition of merit by having the degree of doctor or of master conferred upon them.

13. It is most important that everything be conducted with perfect fairness, and therefore, instead of allowing the academic degree to be won by a disputation, the following plan should be adopted. The candidate (or several at once) should be placed in the midst. Then men of the greatest knowledge and experience should question him and do all they can to find out what progress he has made, both in theory and in practice. For example, they may examine him on the text of the Scriptures, of Hippocrates, of the Corpus Juris, etc. ; asking him where such and such a passage occurs, and how it agrees with some other

passage? if he knows of any writer who holds a different opinion, and who that writer is? What arguments he brings to bear, and how the contradictory views may be reconciled? with other similar questions. A practical examination should then follow. Various cases of conscience, of disease, and of law should be submitted to the candidate, and he should be asked what course of action he would pursue, and why? He should thus be examined with regard to a number of cases, until it is evident that he has an intelligent and thorough grasp of his subject. Surely, students who knew that they were to be publicly examined with such severity, would be stimulated to great industry.

14. There is no need to say anything about travel (to which we assigned a place in this last period of six years, or at its conclusion), except to remark that we are at one with Plato, who forbade the young to travel until the hot-headedness of youth had passed away, and they were sufficiently versed in the ways of the world to do so with advantage.

15. It is scarcely necessary to point out how useful a School of Schools or Didactic College would be, in whatever part of the world it were founded. Even if it be vain to hope for the actual foundation of such a college, the desired result might still be brought about, existing institutions being left as they are, if learned men would work together, and in this way seek to promote the glory of God. These men should make it the object of their associated labours to thoroughly establish the foundations of the sciences, to spread the light of wisdom throughout the human race with greater success than has hitherto been attained, and to benefit humanity by new and useful inventions; for, unless we wish to remain stationary or to lose ground, we must take care that our successful beginnings lead to further advances. For this no single man and no single generation is sufficient, and it is therefore essential that the work be carried on by many, working together and employing the researches of their predecessors as a starting-point. This Universal College, therefore, will bear

Knappack

the same relation to other schools that the 'belly' bears to the other members of the body ; since it will be a kind of workshop, supplying blood, life, and strength to all.

16. But we must return to our subject and say what remains to be said about our schools.

CHAPTER XXXII

OF THE UNIVERSAL AND PERFECT ORDER OF INSTRUCTION

1. WE have now spoken at length on the necessity of reforming schools and on the methods by which this reformation can be effected. It will not be amiss if we give a brief summary of our ideals and of the means we have proposed for their realisation.

2. Our desire is that the art of teaching be brought to such perfection that there will be as much difference between the old system and the new, as there is between the old method of multiplying books by the pen and the new method introduced by the printing-press; that is to say, the art of printing, though difficult, costly, and complicated, can reproduce books with greater speed, accuracy, and artistic effect, than was formerly possible; and, in the same way, my new method, though its difficulties may be somewhat alarming at first, will produce a greater number of scholars and will give them a better education as well as more pleasure in the process of acquiring it, than did the old lack of method.

3. It is easy to imagine how impracticable the first attempts of the inventor of printing must have appeared, in comparison with the simple use of the pen; but the event showed of what great use the invention was. For, firstly, by means of a printing-machine two youths can now produce more copies of a book than could have been written by two hundred in the same time.

Secondly, manuscript copies differ in the number and

size of their pages, and the individual lines do not correspond to one another; while printed copies are as like to their original as one egg is like to another, and this is a great advantage.

Thirdly, it is impossible to tell if manuscripts are correct without revising them and comparing them accurately with the original, and this is a laborious and wearisome task. But in the case of printed books the correction of one proof ensures the accuracy of thousands of copies. This would seem incredible to any one unacquainted with printing, but is nevertheless true.

Fourthly, only firm and stiff paper is suitable to write on, but printing is possible on thin and flimsy paper, or on linen.

Finally, it is possible for men who are unable to write to be the most excellent printers; since it is not with their fingers that they carry out the operation, but by means of skilfully arranged type that cannot err.

4. Similar results might be obtained if this new and comprehensive method of teaching were properly organised (for as yet the universal method exists only in expectation and not in reality), since (1) a smaller number of masters would be able to teach a greater number of pupils than under the present system. (2) These pupils would be more thoroughly taught; (3) and the process would be refined and pleasant. (4) The system is equally efficacious with stupid and backward boys. (5) Even masters who have no natural aptitude for teaching will be able to use it with advantage; since they will not have to select their own subject-matter and work out their own method, but will only have to take knowledge that has already been suitably arranged and for the teaching of which suitable appliances have been provided, and to pour it into their pupils. An organist can read any piece of music from his notes, though he might not be able to compose it or to sing or play it from memory; and a school-master, in the same way, should be able to teach anything, if he have before his eyes the subject-matter and the method by which it should be taught.

5. Pursuing this analogy to the art of printing, we will show, by a more detailed comparison, the true nature of this new method of ours, since it will thus be made evident that knowledge can be impressed on the mind, in the same way that its concrete form can be printed on paper. In fact, we might adapt the term "typography" and call the new method of teaching "didachography." But this conception we will analyse at length.

6. The art of printing involves certain materials and processes. The materials consist of the paper, the type, the ink, and the press. The processes consist of the preparation of the paper, the setting up and inking of the type, the correction of the proof, and the impression and drying of the copies. All this must be carried out in accordance with certain definite rules, the observance of which will ensure a successful result.

7. In didachography (to retain this term) the same elements are present. Instead of paper, we have pupils whose minds have to be impressed with the symbols of knowledge. Instead of type, we have the class-books and the rest of the apparatus devised to facilitate the operation of teaching. The ink is replaced by the voice of the master, since this it is that conveys information from the books to the minds of the listener; while the press is school-discipline, which keeps the pupils up to their work and compels them to learn.

8. Any kind of paper can be used, but the cleaner it is, the better it will receive the impress of the type. In the same way, our method can deal with any class of intelligence, but succeeds best with talented pupils.

9. There is a great analogy between the type and the class-books (that our method requires). Firstly, the type have to be cast and polished, before books can be printed; and in the same way the necessary apparatus must be provided before we can begin to use the new method.

10. A considerable quantity of type is required to print a whole work, and the same thing holds good of class-books and teaching apparatus; since it is irritating,

tedious, and fatal to good teaching to begin and then to be compelled to leave off through lack of the proper appliances.

11. A well-managed printing-press is supplied with all kinds of type, and is thus equal to every demand that can be made upon it; and, similarly, our class-books must contain everything necessary for a thorough education, that there may be no one who by their aid cannot learn whatever should be learned.

12. The type are not left in confusion, but are neatly arranged in boxes that they may be ready to hand when needed. Similarly, our class-books do not present their subject-matter to the pupil in a confused mass, but split it up into sections, allotting so much to a year, a month, a day, and an hour.

13. Only those type which are needed at the minute are taken from the type-cases; the rest remain undisturbed. Similarly, no books but those intended for his class should be given to a boy; others would only confuse and distract him.

14. Finally, type-setters use a straight edge which helps them to arrange the words in lines, and the lines in columns, and prevents any part from getting out of place. In the same way the instructors of the young should have some standard or model to aid them in their work; that is to say, guide-books should be written for their use, and these should tell them what to do on each occasion, and should preclude the possibility of error.

15. There will, therefore, be two kinds of class-books, those that contain the subject-matter and are intended for the pupils, and guide-books to assist the teacher to handle his subject properly.

16. As we have already remarked, it is the voice of the teacher that corresponds to the ink used in printing. If it be attempted to use type when they are dry, nothing but a faint and evanescent mark is made on the paper, in contrast to the firm and almost indelible impression that results when they have been inked. Similarly, the in-

struction that boys receive from books, those dumb teachers, is obscure and imperfect, but when it is supplemented by the voice of the teacher (who explains everything in a manner suitable to his hearers), it becomes vivid and makes a deep impression on their minds, so that they really understand what they learn and are conscious that they understand it. Again, printing-ink differs from writing-ink, since it is made, not with water, but with oil (indeed, those who want a very superior ink, use the finest oil and the best charcoal); and, similarly, the voice of a teacher who can teach persuasively and clearly should sink like oil into the pupils' minds and carry information with it.

17. Finally, the function of the press in printing is performed in schools by discipline, which is in itself sufficiently powerful to ensure that no pupil shirk his studies. Every sheet of paper that is to form part of a book must pass through the press (hard paper needing more, and soft paper less pressure); and, similarly, whoever wishes to learn at a school must be subjected to its discipline. There are three grades of discipline: firstly, perpetual watchfulness; for since we can never put implicit faith in the diligence or innocence of boys (are they not Adam's brood?) we must keep them continually under our eyes. Secondly, blame, by which those who leave the beaten path must be recalled to the way of reason and obedience. Finally, punishment, which must be employed if exhortation have no effect. All discipline, however, must be used with prudence and with no other object than to induce the pupils to do all their work well.

18. I said that certain processes were necessary, and that these had to be carried out in a certain definite manner. This point deserves a brief investigation.

19. If a certain number of copies of a book is to be printed, that number of sheets is taken at once and printed from the same block, and from each successive block, from the beginning to the end of the book, the same number of sheets, and neither more nor less, is printed; since otherwise some copies of the book would be imperfect. In the

same way, our didactic method lays it down as an essential condition that the whole school be given over at one and the same time to the teaching of one master, that from beginning to end all the scholars be subjected to a graduated course of instruction, and that none be allowed to enter after the session has once begun, or to leave before it is finished. In this way it will be possible for one master to teach a large number of pupils, and for all the pupils to learn every branch of knowledge thoroughly. It will therefore be necessary for all the public schools to open and to close at the same time (it suits our method best if the schools open in autumn rather than in spring), in order that the task allotted to each class may be completed each year, and that all (except those wanting in intellect) may be brought up to a certain standard at the same time, and may enter the next class together. This is an exact analogy of the method used in printing when all the copies of the first page are printed first, then those of the second page, and so on.

20. The better class of books are divided into chapters, columns, and paragraphs, and have spaces on their margins and between their lines. Similarly, our didactic method must have its periods of toil and of rest, with definite spaces of time set apart for honest recreation. The tasks are mapped out for each year, month, day, and hour, and if these divisions are duly observed no class can fail to reach the necessary standard at the end of the session. There are excellent reasons why the hours of public instruction should not exceed four daily, of which two should be before, and two after mid-day. On Saturday the two afternoon hours may be remitted, and the whole of Sunday should be devoted to divine service, so that we have thus twenty-two hours weekly and (making allowance for the holidays) about a thousand hours yearly. How much might be taught and learned in this time, were it only methodically employed!

21. As soon as the type has been set up, the paper is flattened out and laid ready to hand, that nothing may

impede the process of printing. Similarly, a teacher should place his pupils in front of him that he may see them and be seen by all. This we have already shown in chap. xix. Problem 1.

22. The paper is damped and softened, that it may be better fitted to receive the impression of the type. Similarly the pupils in a school must continually be urged to attend, as we have already explained.

23. When this has been done, the type are inked, that a distinct impression may be taken from them. Similarly, the teacher makes the lesson vivid by means of his voice, reading it over and explaining it, that all may understand.

24. The paper is then put into the press, one piece after the other, that the metal type may impress their form on each and every sheet. Similarly, the teacher, after he has explained a construction, and has shown by examples how easily it can be imitated, asks individual pupils to reproduce what he has said, and thus show that they are not merely learners, but actually possessors of knowledge.

25. The printed sheets are then exposed to the wind and are dried. Similarly, in school, the intellects of the pupils are exposed to the bracing influences of repetition, examination, and emulation, until it is certain that the lesson has been thoroughly learned.

26. When they have passed through the press, the printed sheets are all taken and arranged in order, that it may be seen if the copies are complete and without defects, and are therefore fit to be bound, sold, and used. The same function is performed in schools by the examination at the end of the year, when the progress of the pupils, and the thoroughness and comprehensiveness of their training, are investigated by the inspectors; the object being that these latter may certify that the subjects appointed have been properly learned.

27. So far we have confined ourselves to generalities, reserving our detailed investigation for a more suitable occasion. For the present it is sufficient to have shown that our discovery of didachography, or our universal

method, facilitates the multiplication of learned men in precisely the same way that the discovery of printing has facilitated the multiplication of books, those vehicles of learning, and that this is greatly to the advantage of mankind, since "the multitude of the wise is the wisdom of the world" (Wisdom vi. 24). And, since our desire is to increase the sum of Christian wisdom, and to sow the seeds of piety, of learning, and of morality in the hearts of all who are dedicated to God, we may hope for the fulfilment of the divine prophecy: "The earth shall be full of the knowledge of God, as the waters cover the sea" (Isaiah xi. 9).

CHAPTER XXXIII

OF THE THINGS REQUISITE BEFORE THIS UNIVERSAL METHOD CAN BE PUT INTO PRACTICE

1. THERE is no one, I imagine, who, after a careful examination of the question, will not perceive how blessed would be the condition of Christian kingdoms and states if they were supplied with schools of the kind that we desire. We must therefore see what is necessary in order that these speculations may not remain speculations, but may be realised in some definite form. Not without reason does John Cæcilius Frey express his surprise and indignation that throughout so many centuries no one has ventured to reform the barbarous customs of our schools and universities.

2. For more than a hundred years much complaint has been made of the unmethodical way in which schools are conducted, but it is only within the last thirty that any serious attempt has been made to find a remedy for this state of things. And with what result? Schools remain exactly as they were. If any scholar, either privately or in school, embarked on a course of study, he found himself a butt for the mockery of the ignorant or the malevolence of the ill-disposed, or finally, being unable to obtain any assistance, found his endeavour too laborious, and gave it up. Thus all efforts have hitherto been in vain.

3. We must therefore seek and find some way by which, with God's assistance, motive power may be supplied to the machine that is already sufficiently well constructed,

or at any rate can be constructed on the foundations which exist, if the obstacles and hindrances that have hitherto been present be wisely and firmly removed.

4. Let us isolate and examine these obstacles.

(i.) There is a great lack of methodical teachers who could take charge of public schools and produce the results that we have in view (indeed, with regard to my *Janua* which is already used in schools, a man of great judgment has written to me complaining that in most places one thing is lacking, namely, suitable men to use it).

5. (ii.) But even if teachers of this kind existed, or if they could all perform their task with ease by using time-tables and forms all ready prepared for them, how would it be possible to support them in each village and town, and in every place where men are born and brought up in Christ?

6. (iii.) Again, how can it be arranged that the children of the poor shall have time to go to school?

7. (iv.) The opposition of pedants, who cling to old ways and despise everything that is new, is greatly to be dreaded, but for this some remedy can easily be found.

8. (v.) There is one factor which by its absence or its presence can render the whole organisation of a school of no avail or can aid it in the highest degree, and that is a proper supply of comprehensive and methodical class-books. Since the invention of printing, it has been an easy matter to find men who are able and willing to make use of it, who will supply the funds necessary for the printing of good and useful books, and who will purchase books of this kind. Similarly, if the subsidiary apparatus necessary for comprehensive teaching were provided, it would be easy to find men to employ it.

9. It is evident, therefore, that the success of my scheme depends entirely upon a suitable supply of encyclopædic class-books, and these can be provided only by the collaboration of several original-minded, energetic, and learned men. For such a task transcends the strength of one man, and especially of one who is unable to devote his whole time to it, or who may be imperfectly acquainted with

some of the subjects that must be included in the comprehensive scheme. Moreover, if absolute perfection be desired, one lifetime is not sufficient for the completion of the work, which must therefore be entrusted to a collegiate body of learned men.

10. But it is impossible to call such a body into existence unless it be supported and financed by some king or state, while to ensure success a quiet and secluded spot and a library are necessary. In addition, it is essential that no one offer any opposition to such a goodly plan for glorifying the Creator and benefiting the human race, but rather that all prepare to work in harmony with the grace of God, which will be communicated to us more liberally through these new channels.

11. Therefore let your zeal blaze forth when ye hear this wholesome counsel. O dearest parents of children, into whose charge God has entrusted His most precious treasures, those made in His own image, may ye never cease to entreat the God of Gods that these efforts may have a successful issue, and by your prayers and solicitations to work upon the minds of powerful and learned men. In the meantime, bring up your children piously in the fear of God, and thus prepare the way for that more universal education of which we have spoken.

12. Do you also, O instructors of the young, whose task it is to plant and water the tender grafts of paradise, pray with all earnestness that these aids to your labours may be perfected and brought into daily use as soon as possible. For since ye have been called that "ye may plant the heavens and lay the foundations of the earth" (Isaiah li. 16), what can be more pleasing to you than to reap as rich a harvest as possible from your labour? Therefore, let your heavenly calling, and the confidence of the parents who entrust their offspring to you, be as a fire within you, and give you and those who come under your influence no rest until the whole of your native land is lit up by this flaming torch.

13. Ye men of learning, to whom God has given wisdom

and keen judgment that ye may be able to criticise such matters as these and improve them by your counsels, see that ye delay not to assist the sacred fire with your sparks, nay, rather with your torches and with your fans. Let all consider that saying of our Christ: "I came to cast fire upon the earth; and what will I if it is already kindled?" (Luke xii. 49). If He wish His fire to burn, woe unto him who, when he has the opportunity of bringing fuel to the flames, contributes nothing but the smoke of envy, malevolence, and opposition. Remember the reward that He promises to His good and faithful servants who employ the talents entrusted to them in such a way that they gain others, and the threats that He utters against the slothful who bury their talents in the earth (Matt. xxv. 25). Therefore, let not your own knowledge suffice you, but use all your strength to further the instruction of others. Be guided by the example of Seneca, who says: "I wish to communicate all that I know to others"; and again: "If knowledge were given me on the condition that I should keep it to myself and not share it with others, I should refuse it" (*Epist.* 27). Do not, therefore, withhold instruction and wisdom from the Christian people, but rather say with Moses: "Would God that all the Lord's peoples were prophets!" (Num. xi. 29). The reformation of the Church and of the state is comprised in the proper instruction of the young; and shall we, who know this, stand idle, while others put their hand to the work?

14. May we all, with one accord, be moved to promote such a worthy object in every possible manner by advising, warning, exhorting, reforming, and in every way furthering the work for God and for posterity. And let no one think that he is not called upon to act in the matter. For though a man may be naturally unsuited to be a schoolmaster, or may be fully engaged by his duties as a clergyman, a politician, or a physician, he makes a great mistake if he think that he is on that account exempt from the common task of school-reform. If he wish to prove his devotion to his calling, to him who calls him, and to those to whom

he is sent, he is bound not only to serve his God, his Church, and his country, but also to train up others to do so after him. Socrates has been praised because he employed his time in educating the young instead of holding some public office. "It is of more use," said he, "to train men who can govern, than to govern oneself."

15. O learned scholars, I beseech you not to despise these suggestions because they originate with one less learned than yourselves. Remember the saying of Chrysippus: "Many a market-gardener has spoken to the point. Perchance an ass may know what you do not." And of Christ: "The wind bloweth where it listeth, and ye hear its voice, but know not whence it comes or whither it goes." In the sight of God I protest that it is not by any overweening confidence in myself, or by a desire for fame or for personal advantage, that I am impelled to advertise these ideas of mine. It is the love of God and the wish to improve the condition of humanity that goad me on, and will not suffer me to keep silence when my instinct tells me what should be done. Therefore, if any oppose my efforts, and hinder the realisation of my ideas instead of aiding it, let him be assured that he is waging war, not against me, but against God, against his own conscience, and against nature, whose will it is that what is for the common good be given over for the use of all men.

16. To you also I appeal, Theologians, since it is in your power to be the greatest assistance or the greatest obstacle to my designs. If you choose the latter course, the saying of Bernhard will be fulfilled: "That Christ has no bitterer enemies than His followers, and especially those who hold the first place among them." But let us hope that your actions will be worthier, and more suited to your calling. Remember that our Lord charged Peter to feed not only His sheep but also His lambs, enjoining him to take especial care of the latter (John xxi. 15). This is a reasonable injunction, since shepherds find it easier to feed sheep than to feed lambs, which have still to be moulded by the discipline of the flock and the staff of the herdsman.

Surely a man betrays his ignorance if he prefer unlettered hearers! What goldsmith does not try to procure the very purest gold? What shoemaker does not try to obtain the finest leather? Let us likewise be children of light and wise in our generation, and let us pray that schools may supply us with as many educated hearers as possible.

17. And suffer not envy to enter into your hearts, O servants of the living God, but rather lead others to that charity that envies not, seeks not its own advantage, and thinks no evil. Let no envious thoughts arise if others originate schemes that have never entered into your minds, but be content to learn from others; in order that (as Gregory says) all, being full of faith, may praise God, and may be instrumental in spreading the truth.

18. But to you, in particular, do I direct my prayers, ye rulers and magistrates, who, in God's name, preside over human affairs. To you, as to Noah, it has been entrusted from on high to build an ark for the preservation of the Word of God in this terrible deluge of disasters (Gen. vi.). It is your duty, as it was that of the princes of old, to aid in the building of the sanctuary, and to see that no obstacle be placed in the way of the artificers whom the Lord has filled with His Spirit and has taught to devise ingenious plans (Exod. xxxvi.). You, like David and Solomon, should summon architects to build the temple of the Lord, and should supply them with the necessary materials (1 Kings vi. ; 1 Chron. xxix.). You are those centurions whom Christ will love if you have loved His little ones, and erected schools for them (Luke vii. 5).

19. For Christ's sake, for the sake of our children's salvation, I beseech you to listen to me. This is a weighty question, and concerns the glory of God and the salvation of mankind. Well do I know how much you love your country. If a man came to you and promised to tell you how all your towns might be fortified at a slight cost, how all your youths might be instructed in the art of warfare, how your rivers might be made navigable and be filled with merchant-vessels, in short, how your state might be

brought to a higher pitch of prosperity and security, you would give, not only your careful attention, but your heartiest thanks as well, to him who showed such solicitude for your welfare. And now, what is far more important than any of these things has been shown you, namely, the real and never-failing method by which a supply of such men may be secured, men who, by discoveries such as I have indicated, can be of immense service to their country. With truth did the sainted Luther write, when exhorting the cities of Germany to found schools: "Where one ducat is expended in building cities, fortresses, monuments, and arsenals, one hundred should be spent in educating one youth aright, since, when he reaches manhood, he may induce his fellows to carry out useful works. For a good and wise man is the most precious treasure of a state, and is of far more value than palaces, than heaps of gold and of silver, than gates of bronze and bars of iron." Solomon also is of the same opinion (Eccles. ix. 13). If then we acknowledge that no expense should be spared in order to give one youth a thorough education, what can we say when the gate is opened to the universal education of all, and to an unfailing method by which the understanding may be developed? when God promises to shower His gifts upon us? when our salvation seems so near at hand that His glory dwells with us on earth?

20. Open wide your gates, O princes, that the King of glory may come in (Psalm xxiv.). Give to the Lord glory and honour, ye sons of the mighty. May each one of you be like David, who swore unto the Lord, and vowed unto the mighty one of Jacob: "Surely I will not come unto the tabernacle of my house, nor go up into my bed; I will not give sleep to mine eyes, or slumber to mine eyelids; until I find out a place for the Lord, a tabernacle for the Mighty One of Jacob" (Psalm cxxxii.). Stay not to consider the expense. Give to the Lord, and He will repay you a thousandfold. He who says, "The silver is mine and the gold is mine" (Haggai ii. 9), can demand this as a right, yet of His mercy He adds (when exhorting the people

to build His temple): "Prove me now forthwith if I will not open you the windows of heaven, and pour you out a blessing that there shall not be room enough to receive it" (Mal. iii. 10).

21. Do Thou, therefore, O Lord our God, give each one of us a joyful heart to serve Thy glory as best he may. For Thine is the grandeur, the power, the glory, and the victory. All that is in heaven and in earth is Thine. Thine, O Lord, is the kingdom; Thou art over all princes. Thine are the riches, and Thine is the glory, the might, and the power; Thou canst glorify and magnify whatsoever Thou pleasest. For what are we, who have but received Thy gifts from Thy hands? We are but strangers in Thy sight as were our fathers. Our life on earth is but a shadow and passes away. O Lord our God, all that we do to the honour of Thy name, comes from Thee. Give to Thy Solomons a perfect heart that they may do all that tends to Thy glory (1 Chron. xxix.). Strengthen, O God, that which Thou hast wrought for us (Psalm lxviii. 28). Let Thy work appear unto Thy servants, and Thy glory upon their children. And let the beauty of the Lord our God be upon us; and establish Thou the works of our hands upon us (Psalm xc. 16). In Thee, O Lord, have I trusted, let me never be confounded. Amen.

NOTES

1. GREGORY NAZIANZEN.—A Father of the Church in the fourth century. He was renowned for his eloquence, which he employed in combating the Arian heresy.

2. WOLFGANG RATICH or RATKE (born at Wilster in 1571, died at Erfurt in 1635).—One of the immediate forerunners of Comenius in school reform. He enjoyed the patronage of Count Ludwig of Anhalt-Köthen, through whose liberality he was enabled to found a six-class school at Köthen, in accordance with his didactic principles. He also undertook the reorganisation of the schools at Augsburg, Weimar, Magdeburg, and Rudolfstadt. The lack of success that attended his efforts was due to his quarrelsome disposition and to his utter inability to establish a *modus vivendi* with his colleagues and assistants. For his Principles, see Intr. II.

3. EILHARD LUBIN (born in 1565, in the Duchy of Oldenburg; died in 1621).—Professor of Poetry and Theology at the University of Rostock. His *Didactic*, quoted by Comenius in sec. 17 of his introduction, has not been preserved.

4. CHRISTOPHER HELWIG (1581-1617). Professor of Theology, of Greek, and of Oriental Languages in the University of Giessen. He was one of the Commissioners who examined Ratke's didactic method in 1612.

5. FRANCISCUS RITTER. — This may possibly have been a clergyman and mathematician of some repute in the Palatinate in the early seventeenth century. Morhof mentions him under the name Franciscus Ridderus (*Polyhistor*, i. 1. 16).

6. JOHANNES BODINUS (1530-1596).—A lawyer at Toulouse, author of a treatise, *Methodus ad facilem historiarum cognitionem*.

7. VOGEL.—Probably Ezechiel Vogel, a schoolmaster at Göttingen, and author of a work, *Ephemerides lingue Latine*, in which he shows how a boy, by working two hours daily, may learn Latin in one year.

8. GLAUM; WOLFSTIRN.—Of the owners of these names I have been unable to obtain any information.

9. JOHN VALENTINE ANDREÆ.—Court-preacher at Stuttgart, where he died in 1654. He was a considerable power in the Church and in the school-room.

10. JANUS CÆCILIVS FREY.—A German physician residing at Paris, where he died of the plague in 1631. On educational questions he wrote several books, remarkable for their sound common-sense.

11. This section is signed with Andreæ's name, but cannot have been written by him, as in the original Bohemian version of the *Great Didactic* it appears in a considerably altered form. Possibly the last sentence is quoted from one of Andreæ's works.

12. STOBÆUS.—A native of Stobi in Macedonia, where he lived about 500 A.D., and composed an Anthology of extracts from as many as 500 Greek authors.

13. PITTACUS OF MITYLENE.—One of the seven wise men of Greece. Lived about 600 B.C.

14. SEXTUS POMPEIVS FESTUS.—A Roman grammarian who lived towards the end of the fourth century A.D.

15. JOHN LUDOVIC VIVES.—One of the great pedagogues of the sixteenth century. Was born at Valencia in 1492; professed the "Humanities" at Louvain and was afterwards invited by Henry VIII. to England, where he became the tutor of the Princess Mary. His best known works on education are: *De ratione studii puerilis epistole duæ*; *De tradendis disciplinis sive de institutione Christiana*; *De institutione fœminæ Christianæ*; *Introductio ad Sapientiam*.

16. BERNHARD.—Abbot of Clairvaux in 1115. A man of great ecclesiastical and political influence, and one of the instigators of the Third Crusade.

17. LACTANTIUS.—For some years tutor to a son of the Emperor Constantine. Converted to Christianity in middle life, he wrote a voluminous treatise, *Divinarum institutionum libri vii.*; a plea for Christianity, intended for pagans who had received a philosophic education. He died about 330 A.D.

18. MATTHEW DRESSER (1536-1607).—Was successively Professor of Greek at Erfurt, Professor of Rhetoric at Jena, Rector of the school at Meissen, and Professor of Greek and Latin at Leipzig.

19. LIEBHARD CAMERARIUS.—A renowned sixteenth century scholar and editor of the classics. Sympathised with the Reformation and was a friend of Melancthon's. Died in 1574.

20. GULARTIUS.—Nothing appears to be known of this scholar or his works.

21. GEORGE AGRICOLA (born in Saxony, 1490).—The founder of the modern school of mineralogy and metallurgy. Mining in Germany owed much to his researches, which were considered authoritative as late as the eighteenth century.

22. CHRISTOPHER LONGOLIUS (1488-1522).—Born at Mecheln and resident in Paris. A renowned classic of his day. Died at Padua.

23. HIPPOLITUS GUARINO.—Lived in the first half of the seventeenth century. Was town physician at Speyer.

24. JOHN PICO MIRANDOLO (1463-1494).—In early youth gave evidence of remarkable ability. When fourteen years old went to Bologna, where he studied canon law and philosophy. His memory was so retentive that if 20,000 words were repeated to him once, he could reproduce them in the same order. He published 900 theses and challenged the learned men of the whole world to dispute with him on any one of them. Accused of heresy, he was acquitted by Pope Innocent VIII. He died at Florence.

25. JOSEPH JUSTUS SCALIGER.—Flourished in France at the end of the sixteenth and beginning of the seventeenth centuries. Possessed a marvellous knowledge of the classics and of oriental languages. His learning was more than equalled by his vanity and quarrelsomeness.

26. PIERRE DE LA RAMÉE.—Professor of Mathematics and Humanity at the University of Paris in the middle of the sixteenth century. Was killed in the Massacre of St. Bartholomew, August 24th, 1572.

27. GREGORY CNAPIUS (1574-1638).—A Polish Jesuit, Professor of Oratory, Mathematics, and Theology. Was author of a *Thesaurum Polono-Latino-Græcum*.

28. Not *conjunctus* but *convinctus* is now the generally accepted derivation of *cunctus*.

29. JOACHIM FORTIUS or RINGELBERG (died in 1536).—Born at Antwerp and brought up at the court of Maximilian I. A man of varied talent, and a voluminous author, he attained success as a mathematician, a philologist, a painter, and an etcher.

30. ROBERT FLUTT (1574-1637).—Born at Milgate in Kent. Travelled in France, Spain, Italy, and Germany, and finally settled in London, where he practised medicine. On physics he had the most fantastic notions, and imagined that the root principles of chemistry were to be found in the Bible. Was author of a *Meteorologica Cosmica*.

31. ANDREAS HYPERIUS (1511-1564).—A member of the Reformed Church, born at Ypres. He studied at Paris and lectured there on Dialectic and Rhetoric, afterwards becoming Professor of Theology at Marburg.

32. FULGENTIUS.—A Catholic Bishop who lived about 500 A.D.

He defended the views of the Orthodox Church against the Arian and Pelagian heresies.

33. PRISCIAN.—A grammarian who lived and taught at Constantinople in the sixth century. His Latin Grammar was the basis for much of the grammatical instruction of the middle ages.

34. *Expulsion of pagan books.*—It is difficult to reconcile Comenius' denunciation of the classics in this chapter with his introduction of them into his scheme elsewhere. In this phase of mind he does but return to the distrust displayed by the Church for the new learning introduced by the Renaissance. It is curious to note that no stress is laid on the Utilitarian and "pressure-of-other-subjects" argument now so frequently made use of. Comparatively recently (1850 and 1851) two French writers, the Abbé Gaume and Bastiat, have condemned the use of the classics in schools from a point of view very similar to that of Comenius. Gaume in a pamphlet, *Le ver rongeur*, maintained that all literature prior to Christ's coming was devoid of morality, and that the Fathers should be read in preference to Latin writers of the golden age. Bastiat, in a curious book entitled *Baccalauréat et Socialisme*, objects to any study that will introduce school-boys to a people who, like the Romans, lived by robbery and oppression. "Cette nation," he declares, "s'est fait une politique, une morale, une religion, une opinion publique conforme au principe brutal qui la conserve et la développe. La France ayant donné au clergé le monopole de l'éducation, celui-ci ne trouve rien de mieux à faire que d'envoyer toute la jeunesse française chez ce peuple, vivre de sa vie, s'inspirer de ses sentiments, s'enthousiasmer de ses enthousiasmes, et respirer ses idées comme l'air."

35. CASSIODORUS (died 562 A.D.).—Held high office under Theodoric and his successor. After the fall of the Goths he retired into seclusion and employed himself in writing works of a philosophic nature on grammar and orthography.

36. PIETRO BEMBO.—A renowned Italian Cardinal in the sixteenth century. Was secretary to Pope Leo X., and wrote with elegance in both Latin and Italian.

37. ISIDORUS (died 635 A.D.).—Bishop of Seville. Was a student of the classics in an age when they were generally neglected. Compiled a kind of encyclopædia entitled *Originum sive Etymologiarum libri xx.*

38. *Sketch of the Mother-School.*—It is interesting to observe the development or rather the application at the present day of Comenius' ideas on infant education. The following extracts from the French code of 1887 reflect the Comenian spirit very markedly:—

"L'école maternelle n'est pas une école au sens ordinaire du mot ;

elle forme le passage de la famille à l'école, elle garde la douceur affectueuse et indulgente de la famille, en même temps qu'elle initie au travail et à la régularité de l'école." . . . " Une bonne santé ; l'ouïe, la vue, le toucher déjà exercés par une suite graduée de ses petits jeux et de ses petites expériences propres à l'éducation des sens ; des idées enfantines, mais nettes et claires, sur les premiers éléments de ce qui sera plus tard l'instruction primaire ; un commencement d'habitudes et de dispositions sur lesquelles l'école puisse s'appuyer pour donner plus tard un enseignement régulier ; le goût de la gymnastique, du chant, du dessin, des images, des récits ; l'empressement à écouter, à voir, à observer, à imiter, à questionner, à répondre ; une certaine faculté d'attention entretenue par la docilité, la confiance et la bonne humeur ; l'intelligence éveillée enfin et l'âme ouverte à toutes les bonnes impressions morales ; tels doivent être les résultats de ces premières années passées à l'école maternelle, et, si l'enfant qui en sort arrive à l'école primaire avec une telle préparation, il importe peu qu'il y joigne quelques pages de plus ou de moins du syllabaire."

39. WILLIAM ZEPPE.—A preacher at Herborn at the close of the sixteenth and beginning of seventeenth centuries.

40. JOHN HENRY ALSTED.—See Intr. I. and II.

41. SIMON STEVIN (died 1633).—The author of numerous mathematical works and an inspector of dams in Holland.

42. JUSTUS LIPSIVS (born 1574).—Resided at Louvain, where he wrote works of a philosophical nature. His learning and his literary style are greatly praised by Morhof.

APPENDIX

THE WORKS OF COMENIUS, ARRANGED IN CHRONOLOGICAL ORDER OF COMPOSITION

[C.] signifies that the work was written in Cæch

1. 1612. *Lingux Bohemicæ Thesaurus, hoc est Lexicon plenissimum, Grammatica accurata, idiotismorum elegantix emphases adagiaque.*
2. 1612. *Amphitheatrum Universitatis.*
3. 1613. *Sylloge quæstionum controversarum, philosophiæ viridario depromptarum.* Herbornæ, 1613.
4. 1615. *De angelis.*
5. 1616. *Grammaticæ facilioris præcepta.* Pragæ, 1616.
6. 1617. *Pauperum oppressorum clamores in cælum.* Olmutii, 1617.
7. 1620. *The spiritual salvation of faithful Christians, worn out by countless temptations.* [C.]
8. 1620-2. *De Antiquitatibus Moraviæ.*
9. 1620-30. *De origine Baronum a Zerotin.*
10. 1621. *Moraviæ nova et post omnes priores accuratissima Delineatio, auctore J. A. Comenio.* 1st ed. 1627 ; last, 1695.
11. 1622. *Meditations on the Christian perfection, which God, in His Word, shows to His chosen ones ; which He implants in them through His Spirit ; and which, to their unspeakable blessedness, He kindles and brings to full completion.* Prague, 1622. [C.]
12. 1622. *The impregnable fortress of God's name, where all find safety who fly thither in trials and in danger.* [C.]
13. 1622. *Lamentation of a Christian over the oppression of his Church and of his country.* [C.]

14. 1623. The Labyrinth of the World and the Paradise of the Heart. Amsterdam, 1663. [C.]

15. 1623. The orphan's plight. That is to say, abandonment by all friends, protectors, and helpers. Lissa, 1634. [C.]

16. 1625. Centrum securitatis. Lissa, 1633. [C.]

17. 1625. The Revelations and Visions of Christopher Kotter. [C.]

18. 1626. The Psalms of David. A version in Czech. Vienna, 1661.

19. 1628-32. The Didactic of John Amos Comenius. Prague, 1849. [C.]

The Latin version, under the title *Didactica Magna*, was published at Amsterdam in 1657.

20. 1628. Informatorium of the Mother-School. Prague, 1858. [C.]

The Latin version, under the title : *Schola Infantiae, sive de provida Juventutis primo sexennio Educatione*. Amsterodami, 1657.

German version by Comenius. Lissa, 1633.

21. 1628. Vernaculæ Scholæ Classis sex Libelli.

22. 1628. J. A. Comenii Janua Linguarum Reserata. Sive Seminarium Linguarum et Scientiarum Omnium. Hoc est Compensiosa Latinam (et quamlibet aliam) Linguam, una cum Scientiarum, Artiumque omnium fundamentis, perdiscendi Methodus ; sub Titulis centum, Periodis autem mille, comprehensa. 1st edition pub. by Comenius in 1633. Published in Greek and Latin at Oxford as late as 1800 ; and in Latin, German, and Czech at Prague in 1874.

23. 1629. De veris et falsis prophetis. Written in Czech and translated into Latin for inclusion in *Lux in Tenebris*.

24. 1630. Praxis Pietatis ; The practice of true Piety. [C.] Lissa, 1631.

25. 1630. Funeral oration over Esther Sadowska (written in German).

26. 1631. Grammatica latina legibus vernaculæ concinnata.

27. 1631. Concordance of the Holy Scriptures. (Burnt at Lissa.)

28. 1631. Evangelistarum Harmonia.

29. 1632. Historia fratrum Bohemorum.

30. 1632. Manual of the Holy Scriptures. Written for the Bohemian Church. [C.]

31. 1632. History of the sufferings, the death, the burial, and the resurrection of Jesus Christ ; compiled from the four Evangelists. [C.]

32. 1632. Historia Persecutionum Ecclesiæ Bohemicæ. Jam inde a primordiis conversionis suæ ad Christianismum, hoc est, Anno 894 ad Annum usque 1632. Ferdinando secundo Austriaco regnante, In qua Inaudita hactenus Arcana Politica consilia, artes, præsentium

bellorum veræ causæ et judicia horrenda exhibentur. Nunc primum edita cum duplici Indice. A.D. 1648. Translated into Czech and published at Lissa in 1655.

33. 1632. *Haggæus Redivivus*. Sorrowful exhortation, in God's name, of Christian rulers, of God's ministers, and of all nations. [C.]

34. 1632. Short sketch of the reorganisation of schools in the Kingdom of Bohemia. [C.]

35. 1632. The Basis and Duration of the two Churches, the true and the false; of which the true Church, founded in Paradise through the name of Jesus Christ, will endure to the end of the World. [C.]

36. 1632. Some questions that concern the Unity of Bohemian Brethren. First printed in 1878. [C.]

37. 1632-3. *Physicæ ad lumen divinum reformatæ synopsis philodidactorum et theodidactorum censuræ exposita*. Lipsiæ, 1633.

38. 1632. *Astronomia ad lumen Physicum reformanda*.

39. 1632-3. The wisdom of the Forefathers set forth as a mirror for their Descendants. First printed in 1849. [C.]

40. 1633. *Januæ Linguarum Reseratæ Vestibulum, Quo Primus ad Latinam Linguam aditus Tirunculis paratur*. Many editions. Latest in 1867.

41. 1634. Suggestions for a new edition of the Chant-Book. [C.]

42. 1634. *Conatuum Comenianorum Prælua*. Oxoniæ, 1637.

43. 1635. *Leges Illustris Gymnasii Lesnensis*.

44. 1635. Account of a tractate hostile to the Unity, by Samuel Martin, and refutation of the same. Lissa, 1636. [C.]

45. 1636. XXI. Sermons. Of the mysteries of Death and of Resurrection. Lissa, 1636. [C.]

46. 1636. The Mirror of Good Government. Funeral oration over Count Raphael of Lissa. Lissa, 1636. (Composed in German.)

47. 1637. J. A. Comenii *Faber Fortunæ sive Ars consulendi ipsi sibi*. Amsterodami, 1657.

48. 1637. The Way of Peace; that is to say, the only true and unfailing means by which God's Church can be preserved in Harmony, Concord, and Love. Lissa, 1637. [C.]

49. 1637. *De Quæstione Utrum Dominus Jesus Propriâ Virtute a mortuis Resurrexit. Ad Melchiorem Schefferum Socinistam, breve ac solidum Joh. A. Comenii Responsum*. Amstelodami apud Joannem Janssonium 1659.

50. 1637. *De Sermonis Latini Studio, Per Vestibulum, Januam, Palatium, et Thesaurus Latinitatis, quadripartito gradu plene absolvendo, Didactica Dissertatio*. Lissa, 1637.

51. 1638. *Diogenes Cynicus Redivivus, sive De compendiose Philo-*

sophando. Ad Scholæ ludentis exercitia olim accommodatus, nunc autem luci datus. Authore J. A. Comenio. Amstelodami, 1658.

52. 1638. Abrahamus Patriarcha. Scena representatus anno 1641 in Januario, sub examen Scholæ publicum. Amstelodami. Anno 1661.

53. 1638. Conatuum Pansophicorum Dilucidatio. In gratiam censorum facta. Londini, 1639.

54. 1639. A Dextris et Sinistris, hoc est pro fide in Christum, Deum-Hominem cum Marcioniticis deliriis (Humanitatem Christi abnegantibus) Lucta. Amsterodami, 1662.

55. 1640. De Christianorum Uno Deo, Patre, Filio, Spiritu. Fides antiqua, Contra Novatores. Amstelodami, 1659.

56. 1640 (?). Janua Rerum reserata, hoc est Sapientia prima (quam vulgo Metaphysicam vocant) ita Mentibus hominum adaptata ut per eam in totam Rerum Ambitum Omnemque interiorem Rerum Ordinem Et in omnes intimas rebus Coæternas Veritates Prospectus pateat Catholicus Simulque ut eadem omnium humanorum Cogitationum, Sermonum, Operum, Fons et Scaturigo, Forma ac Norma esse appareat. Authore J. A. Comenio. Lugduni Batavorum. Apud Hæredes Jacobi Heeneman. Anno 1681.

57. 1641. Via Lucis. Hoc est, Rationabilis disquisitio, quomodo Intellectualis animorum Lux, Sapientia, tandem sub Mundi vesperam per omnes mentes et gentes feliciter spargi possit. Amstelodami, 1688.

58. 1641-3. J. A. Comenii Pansophiæ Diatyposis Ichnographica et Orthographica delineatione. Totius futuri operis amplitudinem, dimensionem, usus adumbrans. Amsterodami, 1645.

59. 1643. Irenica quædam scripta Pro pace Ecclesiæ.

60. 1643. Calendarium Ecclesiasticum.

61. 1644. Judicium de Judicio Valeriani Magni Mediolanensis, Super Catholicorum et Aatholicorum Credendi Regula, sive Absurditatum Echo. Amstelodami, 1644.

62. 1644-6. Linguarum Methodus Novissima Fundamentis Didacticis solide superstructa. 1648.

63. 1645. Jo. Amos Comenii Eccl. Boh. Episcopi, De Rerum Humanarum Emendatione Consultatio Catholica. 2nd ed. Halle, 1702.

64. 1645. Judicium Ulrici Neufeldii de Fidei Catholicæ Regula Catholica, Ejusque Catholico Usu ad Valerianum Magnum Omnesque Catholicos. 1654.

65. 1645. Regulæ Vitæ Sapientis, harmonicæ, tranquillæ, actuosæ, negotiis obrutæ, liberaliter otiosæ, peregrinantis denique. 1645.

66. 1645. *Pansophiæ dogmaticæ, Latinis olim decretoriæ, nunc systematicæ vulgo dictæ delineatio juxta diatyposin J. A. Comenii.*

67. 1646. *Christianismus reconciliabilis reconciliatore Christo. Hoc est quam facile Christiani si vere ac serio Christiani esse velint, non discordare possint, tam clara ut Sol meridie est demonstratio.*

68. 1648. *Independentia æternarum Confusionum Origo Spectamini Venerabilis Nationalis Synodi in Nomine Christi Londini in Anglia congregatæ subjecta Anno 1648.*

69. 1649. *Of the 'casting out of the dumb and other devils. A sermon delivered at Lissa. 1649. [C.]*

70. 1649. *Index plenus vocum Germanicarum.*

71. 1649. *Johannis Lasitii, nobilis Poloni Historiæ de Origine Et Rebus gestis Fratrum Bohemicorum Liber Octavus, qui est De Moribus et Institutis eorum. Ob præsentem rerum statum seorsim editus. Anno 1649.*

72. 1649. *Manuductio in viam pacis ecclesiasticæ.*

73. 1649. *Funeral Oration over Paul Fabrik. [C.]*

74. 1650. *Syntagma rerum, conceptuum, et verborum.*

75. 1650. *The Will of the Dying Mother; in which she divides among her sons and heirs the treasures entrusted to her by God. Lissa, 1650. [C.]*

76. 1650. *Schola Pansophica. Hoc est, Universalis Sapientiæ Officina, ab annis aliquot ubi ubi gentium erigi optatæ: Nunc autem Auspiciis Illustrissimi Domini D. Sigismundi Racocis de Felseovadas Saros-Pataki Hungarorum feliciter erigenda. 1651.*

77. 1651. *De reperta ad Authores Latinos prompte legendos et clare intellegendos Facili Brevisque Via, Schola Latina, Tribus Classibus divisa. Amsterdam, 1657.*

78. 1651-2. *Eruditionis Scholasticæ Pars Tertia. Atrium Rerum et Linguarum Ornamenta exhibens. In usum Scholæ Patakinæ editum. Anno 1652.*

79. 1651. *J. A. Komensky's The Art of Preaching. Prague, 1823. [C.]*

80. 1651. *Primitiæ laborum Scholasticorum. 1651.*

81. 1651-2. *Laborum Scholasticorum in Illustri Patakinò Gymnasio continuatis.*

82. 1652. *Joachimi Fortii Ringelbergii De Ratione Studii Liber Vere Aureus. Des. Erasmi Roterodami. De Ratione Studii. Edited by Comenius, with an Introduction.*

83. 1653. *Fortius Redivivus, sive de pellenda Scholis ignavia.*

84. 1653. *Præcepta Morum. In usum Juventutis collecta. Anno 1653.*

85. 1653. *Leges Scholæ bene ordinatæ.*

86. 1653. *Orbis sensualium pictus. Hoc est, Omnium fundamentalium in Mundo rerum et in Vita actionum, Pictura et Nomenclatura.* Nuremberg, 1658.

87. 1653. *Animæ sanctæ Æterna Regna cum Triumpho ingredientis Beatum Satellitium.* Anno 1653. Addressed to Laurence de Geer on the death of his father.

88. 1654. *Schola Ludus seu Encyclopædia viva, h. e. Januæ Linguarum praxis comica.* Patak, 1656.

89. 1654. *J. A. Comenii Lexicon Atriale Latino-Latinum Simples et nativas rerum nomenclationes e Janua Linguae Latinæ jam notas, in elegantes varie commutare docens.* Amstelodami, 1658.

90. 1654. *Laborum Scholasticorum Patakinii obitorum Coronis, Sermone valedictorio, ad Scholam Patakinam, ejusque solertes D. D. Scholarchas et Visitatores, Generosorumque Reverendorum magnam panegyryn, habito imposita.* Anno 1654.

91. 1654. *Gentis felicitas Speculo exhibita iis, qui num felices sint et quomodo fieri possint, cognoscere velint.* 1659.

92. 1654-7. *Lux in Tenebris. Hoc est Prophetiæ Donum quo Deus Ecclesiam Evangelicam (in Regno Bohemiæ et incorporatis Provinciiis) sub tempus horrendæ ejus pro Evangelio persecutionis extremæque dissipationis ornare, ac paterne solari dignatus est. Submissis de statu Ecclesiæ in Terris, præsentis et mox futuro, per Christophorum Cotterum Silesium, Christinam Poniatovam Bohemam, et Nicolaum Drabicium Moravum, Revelationibus vere divinis, ab anno 1616 usque ad annum 1656 continuatis. Quæ nunc e Vernaculo in Latinum fideliter translatae in Dei gloriam, afflictorum solatia, aliorumque salutarem informationem ipsius Oraculi jussu in lucem dantur.* Anno 1657.

93. 1655. *The struggle with God in prayer, followed by Resignation to His Will in death as in life. A sermon preached at Lissa on Sept. 24th; at the close of a day of great danger.* 2nd ed. Halle, 1765. [C.]

94. 1655. *Panegyricus Carolo Gustavo Magno Svecorum, Gothorum, Vandalorumque Regi, incruento Sarmatiæ Victori, et quaquâ venit Liberatori, Pio, Felici, Augusto. Heroi afflictis in solatia, Regibus in exemplum, nato. Lugduni Batavorum, 1656.*

95. 1655-6. *Evigila Polonia.*

96. 1656. *Enoch; or, Of the continual intercourse of believers with God.* 1656. [C.]

97. 1656. *The Gift of Long Life. A sermon preached at the burial of Wacslaw Lochar, Consenior of the Moravian Church at Lissa.* [C.]

98. 1656. *Matariarum Pansophicarum Sylva, Definitionum scil.*

omnium rerum et Axiomatum (supra 20 annos magnâ diligentia Congestatus) thesaurus. Burnt at Lissa.

99. 1656. Sapientia Bis et Ter Oculata, Aliud in alio acute videns, aliudque per aliud potenter demonstrans. Burnt at Lissa.

100. 1656. Lesnæ Excidium, Anno 1656 in Aprili factum, fide historica narratum.

101. 1657. Parvulus parvulus, Omnibus Omnia. Hoc est Vestibuli Lat. Linguae Auctarium. Voces Latinas primitivas construi, cœptas, et in Sententias breves redactas, exhibens. Amsterdami, 1657.

102. 1657. J. A. Comenii pro Latinitate Januæ Linguarum suæ, illiusque praxeos Comicæ, Apologia. Amstelodami, 1657.

103. 1657. J. A. Comenii Opera Didactica Omnia, ab anno 1627 ad 1657 continuata. Amsterodami, Anno 1657.

104. 1658. Janua sive Introductorium in Biblia Sacra. Norimbergæ, 1658.

105. 1658. Novi Testamenti Epitome, Typorum Diversitate Res, Verba, Phrases, Atque Sententias Exhibens. Norimbergæ, 1658.

106. 1659. Disquisitiones de Caloris et Frigoris natura, in prodromum novæ editionis Physicæ ad lumen divinum restituendæ. Amstelodami, 1659.

107. 1659. Book of Chants for the Bohemian Church. Amsterdam, 1659. [C.]

108. 1659. Vindicatio Famæ et conscientiæ Johannis Comenii a Calumniis Nicolai Arnoldi. Lugduni Batavorum, 1659.

109. 1659. Historia Revelationum Christophori Kotteri, Christinæ Poniatoviæ, Nicolai Drabicii et quæ circa illas varie acciderunt, usque ad earundem Anno 1657 publicationem, et post publicationem. 1659.

110. 1659. Cartesius cum sua naturali Philosophia a Mechanicis eversus. Amsterodami, 1659.

111. 1660. The mournful cry of the Shepherds, terror-struck by God's anger, to their perishing and scattered flocks. Amsterdam, 1660. [C.]

112. 1660. De bono Unitatis et ordinis disciplinæque et obedientiæ. Amst. 1660.

113. 1660. De Irenico Irenicorum. Hoc est: Conditionibus Pacis a Socini Secta reliquo Christiano Orbi oblatis, ad omnes Christianos facta Admonitio A. Johan. Amos Comenio. Amsterodami, Anno 1660.

114. 1661. Theologia Naturalis. A Raymundo de Sabunde ante duo secula conscriptus, nunc autem Latiniore stylo in compendium redactus. Amst. 1661.

115. 1661. Catechism for young Bohemians. Amst. 1661. [C.]
116. 1661. J. A. Comenio de Iterato Sociniano Irenico Iterata ad Christianos Admonitio. Amst. 1661.
117. 1661. Socinismi Speculum uno intuitu quidquid ibi creditur aut non creditur, exhibens. Amst. 1661.
118. 1662. Johan. Amos Comenii Admonitio Tertia. I. Ad D. Zwickerum ut impios suos adversus Christum et Christianam fidem impetus temperet; II. ad Christianos ut tandem evigilent. Amst. 1662.
119. 1662. Confession of the Beliefs, Teaching, and Religion of the Unity of the Bohemian Brethren. Amst. 1662. [C.]
120. 1662. De rerum humanarum Emendatione Consultationis Catholicæ Pars Secunda Panaugia. Ubi de accendenda Mentibus ante omnia Luce quadam universali, in qua omnes, Omnia, Omnino videri possint, consultatur.
121. 1662. The Moral Teaching of Cato the Wise, translated into Bohemian. Amst. 1662. [C.]
122. 1663. Renuntiatio Mundi. Amst. 1663.
123. 1663. Revelationum Divinarum, in usum Seculi nostri quibusdam nuper factarum, Epitome. 1663.
124. 1664-7. Lux e Tenebris. Tenebris, humanarum abominationum, Divinarumque plagarum. Lux, Divinarum Consolationum, glorioseque refulgentis Ecclesiæ.
125. 1667. Petrus Serarius: Responsio ad Exercitationem Paradoxam Anonymi cujusdam Cartesianæ Sectæ Discipuli qua Philosophiam pro infallibili S. Literas interpretandi normâ Orbi Christiano obtrudit. Amst. 1667.
126. 1669. Unum Necessarium, Scire Quid Sibi sit Necessarium: in Vita et Morte, et post Mortem. Quod non Necessariis Mundi Fatigatus et ad Unum Necessarium Sese Recipiens, Senex J. A. Comenius, Anno ætatis suæ 77, Mundo expendendum offert. Amst. 1668.
127. 1669. De Zelo sine scientia et charitate, Admonitio Fraternalis J. A. Comenii ad D. Samuelem Maresium: Pro minuendis odiis et ampliandis favoribus. Amst. 1669.

THE END

Printed by R. & R. CLARK, LIMITED, Edinburgh.

UNIVERSITY OF MINNESOTA



3 1951 D00 328 352 N

Minnesota Library Access Center



9 ZA R10 D19 S02 TE F